

WorkCentre

7232/7242



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1 Before Using the Machine

Welcome to the Xerox family of WorkCentre products.

This System Administration Guide provides detailed information, technical specifications and procedures for using the integral features of the machine.

Xerox Welcome Center

If you need assistance during or after product installation, visit the Xerox website for on-line solutions and support.

<http://www.xerox.com/support>

If you require further assistance, contact our experts at the Xerox Welcome Center. A local representative telephone number may have been provided when the product was installed. For convenience and future reference, please record the telephone number in the space below.

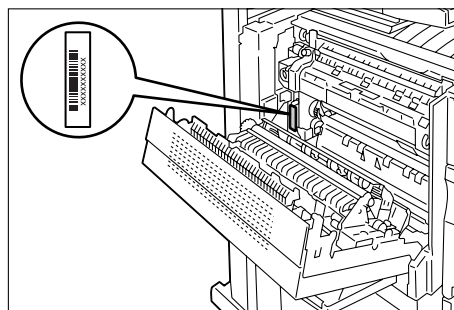
Welcome Center or local representative telephone number:

Xerox US Welcome Center: 1-800-821-2797

Xerox Canada Welcome Center: 1-800-93-XEROX (1-800-939-3769)

Serial Number

When you call the Welcome Center you will need the serial number which is located on the left side of the machine behind Cover A, as shown in the diagram.



For your convenience, record the serial number in the space below.

Serial Number:

Keep a record of any error messages. This information helps us solve problems faster.

Languages Displayed on the Touch Screen

You can change the languages in the following two ways.

To change the language for temporary use, press the <Language> button on the control panel, and then select the required language.

NOTE: The language returns to the default language after rebooting the machine.

To change the default language, press the <Machine Status> button, select the [Tools Tab], select [System Settings], select [Common Settings], and then select [Screen/Button Settings]. In the [Screen/Button Settings] screen, select the required language as [Default Language].

Conventions

This section describes the conventions used throughout this System Administration Guide. In this guide, you will find that some terms are used interchangeably:

- Paper is synonymous with media.
- Document is synonymous with original.
- Xerox WorkCentre 7242/7232 is synonymous with the machine.

Key Operator/System Administrator

Key Operator is the designated user who sets Machine, Copy, and Fax defaults and maintains the machine.

System Administrator is the designated user who sets and maintains the network settings on the machine.

Orientation

Orientation is used to mean the direction of images on the page. When the image is upright, the paper (or other media) can be either long edge feed or short edge feed.

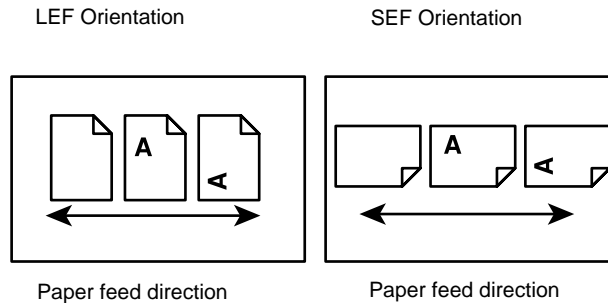
Long Edge Feed (LEF)

When loading documents long edge feed into the document feeder, load with one of the long edges facing into the document feeder. The short edges appear at the top and bottom of the paper, facing the front and back of the document feeder. When loading paper long edge feed into a paper tray, place the paper with one of the long edges on the left-hand side and one of the short edges toward the front of the tray.

Short Edge Feed (SEF)

When loading documents short edge feed into the document feeder, load with one of the short edges facing into the document feeder. The long edges appear on the top and bottom of the paper, facing the front and back of the document feeder. When loading

paper short edge feed into a paper tray, place the paper with one of the short edges on the left-hand side and one of the long edges toward the front of the tray.



Text in [Square Brackets]

Indicate that these are names of the screens, tabs, buttons, features and option categories on the screen. They are also used when referring to file and folder names on a PC.

For example:

- Select [System Settings] on the [System Administrator Menu] screen.
- Close [config.txt] and then open the [drivers] folder.

Text in <Angle Brackets>

Indicate that these are names of the hard buttons, numeric or symbol buttons, lights on the control panel or symbols on the power switch label.

For example:

- Press the switch to the <I> position to switch the machine on.
- Press the <Log In/Out> button on the control panel.

Italic Typeface

The Italic typeface is used to indicate references to other sections and chapters.

For example:

Machine Status – page 28.

Warnings

Warnings are statements that alert you to the possibility of personal harm.

For example:

WARNING: This product must be connected to a protective earth circuit.

Cautions

Cautions are statements that suggest the possibility of mechanical damage as a result of an action.

For example:

CAUTION: Do not connect the network cable to the machine until instructed to do so.

Notes

Notes are statements that provide additional information.

For example:

NOTE: It is recommended that you change the password from the default one. For further assistance, contact your Xerox Welcome Center.

NOTE: Please note that the screens shown in this System Administration Guide apply to a fully configured machine and therefore may not exactly represent the configuration being used.

2 Product Overview

This chapter gives an overview of the features and functions of the machine and enables familiarity with the device network installation.

Detailed information is provided in the following sections.

Machine Components – page 15

Services and Features – page 18

Power On/Off – page 19

Cabling – page 20

Modes – page 21

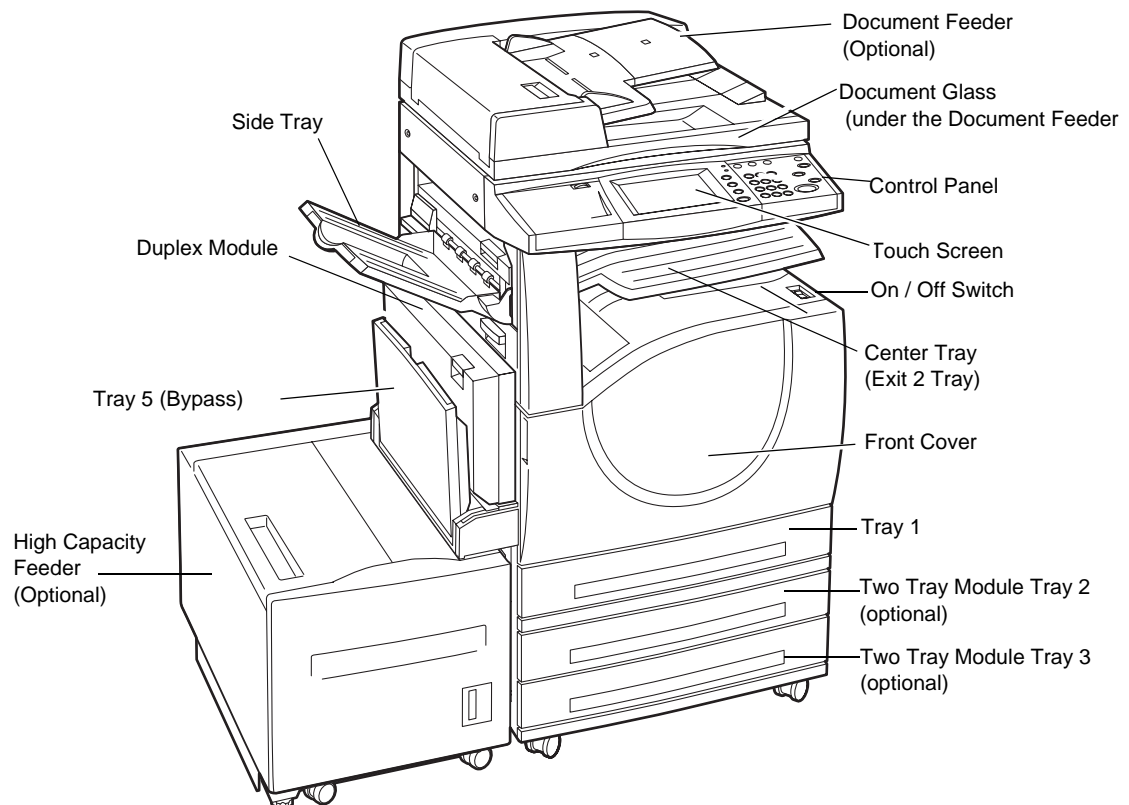
System Controls – page 34

Settings in the Key Operator Mode – page 35

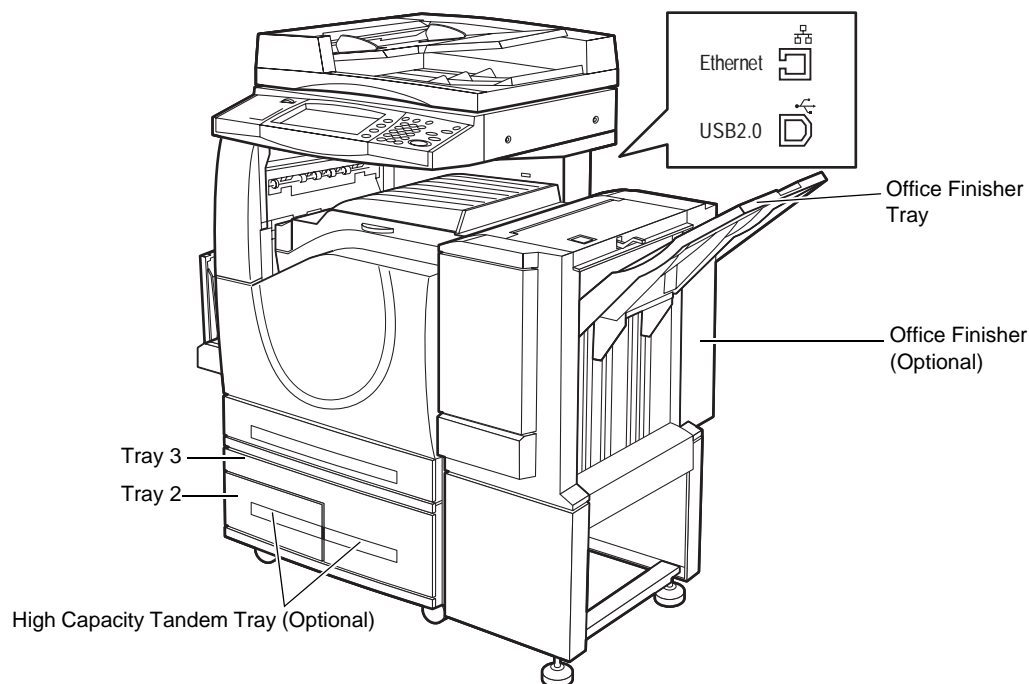
Resident Fonts – page 39

Machine Components

The following diagrams show the standard and optional components of the machine. Configuration may vary depending on the model.



NOTE: Depending on the configuration, the Document Glass Cover is attached instead of the Document Feeder. Two optional paper trays can be attached.



Telephone socket

Located at the back of the machine. The telephone socket is used to connect to the fax kit.

USB 1.1 (Host) Port

Located at the back of the machine. This port is used to connect to the fax kit.

USB 1.1 (Device) Port

Located at the back of the machine. This port is used to connect to a PC for software update downloads.

USB 2.0 (Device) Port

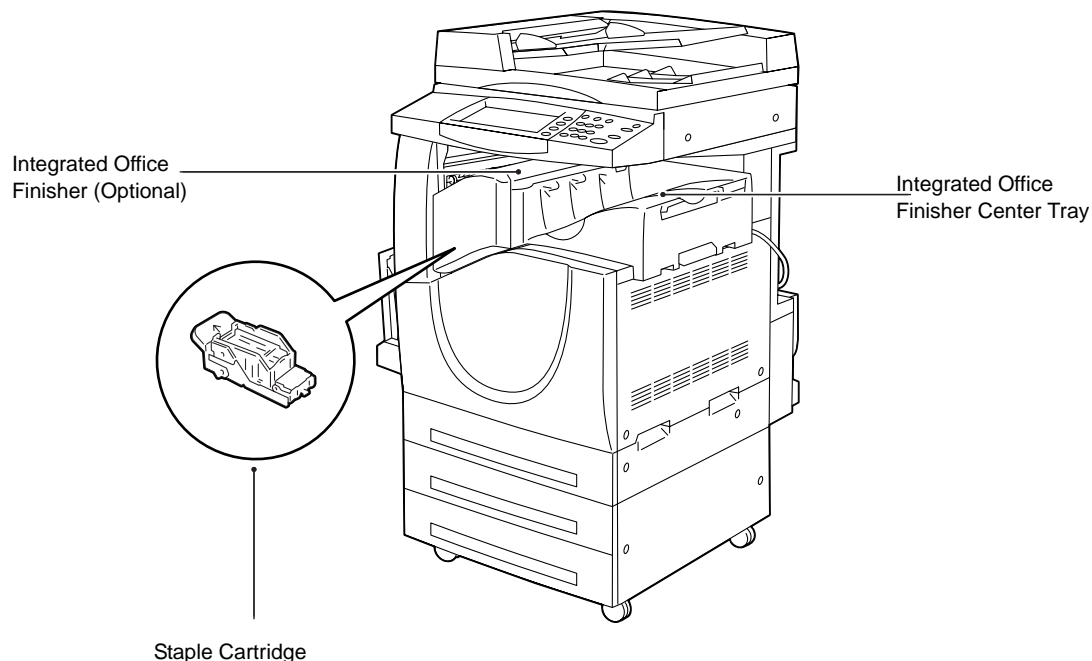
Located at the back of the machine. This port is used to connect to a local client computer and is used as an input port for printing data.

100 Mbps/10 Mbps Port

Located at the back of the machine. This port is used to connect to a network cable.

Office Finisher

Allows you to staple or sort copies automatically. The Office Finisher Tray can hold 1,000 sheets of 20 lb bond or 80 g/m² paper in Letter/A4 size or smaller.



Integrated Office Finisher

Allows you to staple or sort copies automatically. The Integrated Office Finisher Center Tray can hold 500 sheets of 20 lb bond or 80 g/m² paper in Letter/A4 size or smaller.

Duplex Module

Allows you to make double-sided copies. The Duplex Module can be used when paper is supplied from Tray 1, 2, or 3.

Trays 2 & 3

At the base of the machine, the following optional trays will be available, depending on the configuration.

- Two Tray Module – Can be added to the standard 1-tray configuration. Each tray can hold 520 sheets of 20 lb bond or 80 g/m² paper.
- High Capacity Tandem Tray – Can be added to the standard 1-tray configuration to provide high volume paper sources. Tray 2 can hold a maximum of 900 sheets of 20 lb bond or 80 g/m² paper in Letter or A4 size, long edge feed. Tray 3 can hold 1,200 sheets of 20 lb bond or 80 g/m² paper in Letter or A4 size. The High Capacity Tandem Tray is referred to as “HCTT” in this manual.

Tray 5 (Bypass)

Allows you to bypass the standard paper trays to print on different sized paper. The Bypass Tray can hold 100 sheets of 20 lb bond or 80 g/m² paper in sizes ranging from B6 (SEF) or Envelope Monarch (LEF) to A3 (SEF) or 11 × 17 inch (SEF).

NOTE: Do not place paper with a length less than 140mm in the Bypass Tray, as this may cause paper jams and potentially damage the inside of the machine.

Tray 6 (High Capacity Feeder)

Allows you to load up to 2,000 sheets of 20 lb bond or 80 g/m² paper in B5, Executive, Letter, or A4 size, long edge feed. The High Capacity Feeder is referred to as “HCF” in this manual.

Services and Features

The machine has various features and provides valuable services. The following description outlines the features and explains the options on the <All Services> screen.

NOTE: The arrangement of icons for the services and features displayed on the screen can be changed by the Key Operator.

1. Press the <All Services> button on the control panel.
2. Select the required service.

Copy

Allows you to copy documents in various ways. For example, you can produce output which has been reduced or enlarged to a different size, or copy two or four independent documents onto one sheet of paper.

E-mail

Allows you to send scanned documents by e-mail in various ways. For example, you can set the density for scanning, or specify the file format for saving the documents.

Internet Fax

Allows you to send and receive faxes over the Internet or intranet. Internet Fax provides reduced cost of transmissions compared to the use of a conventional phone line. After scanning documents, you can send scanned data by e-mail, and can also receive scanned data in an e-mail attachment sent from an Internet Fax compatible machine.

Fax

Allows you to send regular fax documents. You can send documents in a reduced or enlarged format, or specify destinations using the Address Book or speed dialing features.

Server Fax

Allows you to send and receive image data by using the Fax feature of a Server Fax server. The Server Fax feature cannot be used concurrently with the Fax or Internet Fax feature.

Network Scanning

Allows you to scan documents and store them as electronic documents on a file server on the network by selecting a job template which has various assigned parameters. You can retrieve the stored electronic documents by accessing the file server from a PC.

Scan to PC

Allows you to scan and store documents to specified destinations using the FTP or SMB protocol.

Scan to Mailbox

Enables the confidential mailbox or polling feature by storing the scanned documents in private mailboxes.

Send from Mailbox

Allows you to confirm, print, or delete the documents in a mailbox. It also allows you to change or release linkage with a job flow sheet and execute the linked job flow sheets.

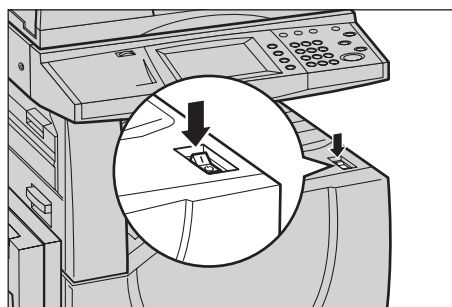
Power On/Off

Powering On

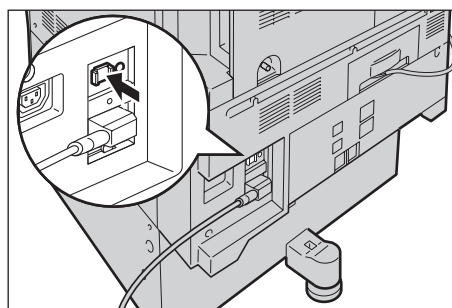
Make sure that the machine is connected to a suitable power supply and that the power plug is firmly connected to the electrical outlet.

The machine is ready to make copies a maximum of 42 seconds after powering on (varies with machine configuration.)

1. Press the power switch to the <I> position.



NOTE: If the machine does not start up, check that the RESET button on the back of the machine is in the reset position (depressed).



Powering Off

Before turning the power off, wait at least 5 seconds after all copy or print jobs have completely finished.

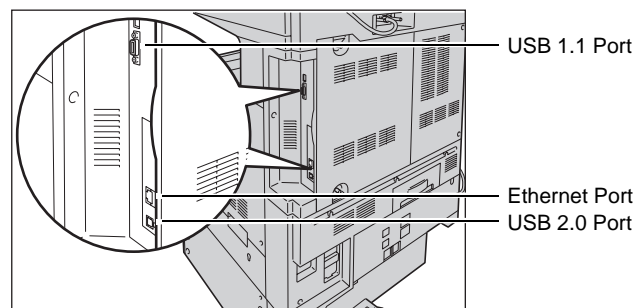
When you switch off the machine, it remains on for approximately 10 seconds while it stores files and prepares for shutdown. The machine then shuts down completely.

CAUTION: Wait at least 20 seconds between powering the system on and off. Failure to do this could cause damage to the hard disk and the machine.

Cabling

Interface Ports

The machine has multiple interface ports as shown in the following diagram.



Telephone socket

Located at the back of the machine. The telephone socket is used to connect to the fax kit.

USB 1.1 (Host) Port

Located at the back of the machine. This port is used to connect to the fax kit.

USB 1.1 (Device) Port

Located at the back of the machine. This port is used to connect to a PC for software update downloads.

USB 2.0 (Device)

USB 2.0 is provided for connection to a PC and is used as an input port for printing data. This is compatible with Full Speed (12 Mbps), and High Speed (480 Mbps), but is not compatible with Low Speed (1.5 Mbps).

Ethernet 10 Mbps/100 Mbps Port

The machine is compatible with SMB, LPD, EtherTalk, NetWare, IPP, HTTP, DHCP, SMTP, POP, DDNS, RARP, Bonjour and Port9100. It supports an Ethernet connector as a standard feature.

There are five Ethernet interface options available on the touch screen: Auto, 100 Mbps Full-Duplex, 100 Mbps Half-Duplex, 10 Mbps Full-Duplex, and 10 Mbps Half-Duplex. When [Auto] is selected, the machine detects the communication speed automatically when powered on and adjusts its settings accordingly.

EtherTalk, NetWare, and TCP/IP protocols that use Ethernet can be switched automatically according to the applied transmission protocol.

NOTE: EtherTalk will function when the optional PostScript Kit is installed.

Modes

Use the mode buttons to access the screens which allow you to select features, monitor the status of jobs and obtain general information on the machine.

There are four buttons on the machine.

- All Services
- Features
- Job Status
- Machine Status

NOTE: These buttons do not respond when the machine is in the System Settings mode.

All Services

Use this button to access all the services available on the machine.

NOTE: The arrangement of service icons displayed on the screen can be changed by the Key Operator.

1. Press the <All Services> button on the control panel.

Features

Use this button to go back one previous screen. If you are using the [Job Status] screen or [Machine Status] screen, press the <Features> button to return to the previous copy, fax, or scan feature screen. The copy, fax, or scan feature screen does not change if you press this button if you are currently viewing one of these screens. In this case, use the <All Services> button to select the copy, fax, or scan feature.

Job Status

Use this button to check the progress of a job, or display the log and detailed information of completed jobs. The latest job is displayed at the top of the list. You can also check, delete, or print documents stored in the public mailbox of the machine. Use the scroll buttons to switch between screens.

For more information on each feature, refer to the following.

Active Jobs – page 22

Completed Jobs – page 23

Secure Print Jobs & More – page 24

1. Press the <Job Status> button on the control panel.
Press the <Features> or <All Services> button at any time to exit.
2. Select the required option.

Active Jobs

This screen allows you to view incomplete jobs that are waiting, in progress, or suspended. It also lists Secure Print, Sample Set, and Delayed Print documents that are currently stored in the machine. You can see job attributes, or promote/delete the job.

1. Press the <Job Status> button on the control panel.
2. Select the [Active Jobs] tab. Use the scroll buttons to switch between screens.
3. Select a job to cancel or promote as required.

Owner

Displays the owner of each job.

Name

Identifies each job by job number and type.

Status

Displays the status of each job, such as copying, printing, and scanning.

Print Waiting Jobs

Prints the jobs waiting in the incomplete jobs queue.

View by Job Type

Allows you to display only the selected type of jobs.

Pop-up Menus

Selecting an active job or stored document in the [Active Jobs] screen displays a pop-up menu that allows you to delete the job, release the stored document, or view the details of the job or stored document.

Pop-up Menu for Active Jobs

- Delete - Deletes the job, or displays a page that asks whether or not to delete the job depending on the job type.
- Job Details - Displays a job screen where you can view the details of the job.
- Close Menu - Closes the pop-up menu.

Pop-up Menu for Stored Documents

- Delete - Deletes the stored document.
- Release - Prints the stored document.
- Details - Displays a job screen where you can view the details of the stored document.
- Close Menu - Closes the pop-up menu.

Job Screen

A job screen allows you to view the details of a job/stored document and select the following buttons. The content of the screen and the buttons displayed will vary depending on the service type and status of the job/stored document.

- Delete – Cancels jobs that are being processed or on hold, or deletes a stored document from the machine's memory.
- Promote Job – Promotes a job in the list to be processed immediately after the one being processed. The promoted job will be marked with an arrow in the job list on the [Current and Pending Jobs] screen.
- Last Original – Indicates the current scan batch is the last in a job to be scanned.
- Next Original – Sequentially scans more sections in the same scan job.
- Start – Starts scanning the next document or prints a job being held on the machine.
- Release – Prints a stored document.

Completed Jobs

This feature allows you to view the finished jobs in the machine. You can select a job in the list to display detailed attributes for that job. The contents of each screen may differ depending on the type or status of the job.

1. Press the <Job Status> button on the control panel.
2. Select the [Completed Jobs] tab. Use the scroll buttons to switch between screens.

Document/Job Type

Identifies each job by job number and type.

Remote Terminal/Contents

Displays the name of the recipient for a fax job, the paper size for a copy job, or the box number for a scan job.

Status

Displays the status of the job, such as completed, cancelled, shutdown.

Result

Displays the number of printed, scanned, sent, or received pages. For cancelled jobs, the status will be blank.

Group Parent Jobs

Select this check box to group all parent jobs together in the job list.

View by Job Type

Allows you to display only the selected type of jobs.

Job Attributes

Select a job on the [Completed Jobs] screen to display the job attributes. The attributes displayed vary depending on the type of job.

- **Show Children Jobs** – Select this button to show all child jobs for the selected job. The button is displayed only when there are child jobs available.
- **Job History Report** – Select this button to print a job history report for both parent and child jobs.

NOTE: The Job History Report feature is enabled by setting the [Print Reports Button] setting to Enabled in the [Common Settings] > [Reports] feature.

Secure Print Jobs & More

This feature allows you to check locally stored documents, print stored documents, and delete stored documents.

NOTE: The jobs displayed are sent from a PC using the print driver. For more information, refer to PCL Driver Online Help.

NOTE: Some features on this screen may not display depending on the system settings and machine configuration.

For more information, refer to the following.

Secure Print – page 25

Sample Set – page 26

Delayed Print – page 27

Public Mailbox – page 27

1. Press the <Job Status> button on the control panel.
2. Select the [Secure Print Jobs & More] tab.
3. Select the required option.

Charge Print

When the Charge Print feature is enabled under [Authentication/Security Settings] > [Authentication] > [Charge/Private Print Settings], this feature allows you to print or delete documents stored for each billing user ID.

1. Select [Charge Print] on the [Secure Print Jobs & More] screen.
2. Select a billing user ID. Use the scroll buttons to switch between screens.
3. Select [Document List].
4. Enter the passcode and select [Confirm].
5. Select a document to print or delete.
6. Select the required option.
 - Refresh - Refreshes the displayed information.
 - Go to - Specifies the Charge Print number to be displayed on the screen. Enter a number within the range of 001 to 200 using the scroll buttons or the numeric keypad.
 - Document List - Displays the list of stored documents for the selected billing user ID in the list. The following options are available:
 - Select All - Selects all documents in the list.
 - Delete - Deletes a document selected in the list.
 - Print - Prints a document selected in the list. After printing, the document is deleted.

Private Charge Print

When the Private Charge Print feature is enabled under [Authentication/Security Settings] > [Authentication] > [Charge/Private Print Settings], this feature allows you to print or delete documents stored for each authentication user ID.

1. Press the <Log In/Out> button.
2. Enter your user ID using the screen keypad or numeric keypad on the control panel, and select [Confirm].
3. Select [Private Charge Print] on the [Secure Print Jobs & More] screen.

NOTE: If you entered the screen with the Key Operator's ID, a list of authentication user IDs will be displayed. Select the desired user ID from the list or enter it in [Go to], and select [Document List]. The documents stored for the selected user ID will appear.

4. Select a document to print or delete.
5. Select the required option.
 - Refresh - Refreshes the displayed information.
 - Select All - Selects all documents in the list.
 - Delete - Deletes a document selected in the list.
 - Print - Prints a document selected in the list. After printing, the document is deleted.

Secure Print

This feature allows you to print or delete passcode-protected stored documents. A secure print job requires a User ID and a passcode registered in the machine.

1. Select [Secure Print] on the [Secure Print Jobs & More] screen.
2. Select a User ID. Use the scroll buttons to switch between screens.
3. Select [Document List].
4. Enter the passcode and select [Confirm].
5. Select a document to print or delete.
6. Select the required option.
 - Refresh – Refreshes the displayed information.
 - Go to – Specifies the Secure Print number to be displayed on the screen. Enter a number within the range of 001 to 200 using the scroll buttons or the numeric keypad.
 - Document List – Displays the passcode input screen for the selected user ID in the list. Enter the passcode to display the list of stored documents. The following options are available:
 - Select All – Selects all documents in the list.
 - Delete – Deletes a document.
 - Print – Prints a document selected in the list. Select whether or not to delete the stored documents after printing.

NOTE: If you have forgotten the passcode, contact the Key Operator. The Key Operator can access the stored documents without entering the passcode.

Sample Set

This feature allows you to print a sample set of a document prior to printing the whole quantity. You can choose whether or not to print more sets after checking the print result.

1. Select [Sample Set] on the [Secure Print Jobs & More] screen.
2. Select a User ID. Use the scroll buttons to switch between screens.
3. Select [Document List].
4. Select a document to print or delete.
5. Select the required option.
 - Refresh – Refreshes the displayed information.
 - Go to – Specifies the Sample Set number to be displayed on the screen. Enter a number within the range of 001 to 200 using the scroll buttons or the numeric keypad.
 - Document List – Displays the list of stored documents for the selected user ID in the list. The following options are available:
 - Select All – Selects all documents in the list.
 - Print – Prints a document selected in the list. After printing, the document is deleted.
 - Delete – Deletes a document selected in the list.

Delayed Print

This feature allows you to store documents on the machine for printing at a later time. You can check, print or delete the stored documents before the specified print time.

1. Select [Delayed Print] on the [Secure Print Jobs & More] screen.
2. Select a document to print or delete. Use the scroll buttons to switch between screens.
3. Select the required option.
 - Document Name – Identifies each document by name.
 - Print Time – Displays the time the document will be printed.
 - Pages – Displays the number of pages.
 - Refresh – Refreshes the displayed information.
 - Print – Prints a document selected in the list.
 - Delete – Deletes a document selected in the list.

Public Mailbox

This feature allows you to check, print, and delete documents stored in a public mailbox on the machine for polling.

1. Select [Public Mailbox] on the [Secure Print Jobs & More] screen.
2. Select a document to print or delete. Use the scroll buttons to switch between screens.
3. Select the required option.
 - Document/Type – Identifies each document by number and type.
 - Stored Date – Displays the date the document was stored.
 - Pages – Displays the number of printed, scanned, sent, or received pages.
 - Refresh – Refreshes the displayed information.
 - Select All – Selects all the documents in the [Public Mailbox].
 - Delete – Deletes a document selected in the list.
 - Print – Prints a document selected in the list.

Undelivered Faxes

This feature allows you to delete or resend undelivered faxes. You can resend faxes to their original recipient or change the recipient.

1. Select [Undelivered Faxes] on the [Secure Print Jobs & More] screen.
2. Select a document to delete or resend. Use the scroll buttons to switch between screens.

3. Press the <Start> button on the control panel to resend the fax to the original recipient. Alternatively, select to delete the document or send the document to a different recipient.
- Delete This Document - Deletes the selected document. A confirmation screen is displayed before the document is deleted.
 - Change Recipients - Displays the [Resend Fax] screen where you can specify a new fax recipient.

[Resend Fax] Screen

1. Select the [Change Recipients] button on the [Undelivered Fax] screen.
 2. Specify a new recipient using the [New Recipients] or [Address Book] button.
- New Recipients - Displays a keyboard which allows you to directly enter a recipient.
 - Address Book - Displays a page which allows you to select a recipient from the Address Book.
 - Starting Rate - Displays the [Starting Rate] screen where you can select the [G3 Auto] or [Forced 4800 bps] communication mode for fax transmissions.

Machine Status

Use this button to check the machine information, the billing information, the status of the toner cartridges and print various reports. Use this button also when accessing the Key Operator mode.

For more information on each feature, refer to the following.

Machine Information – page 28

Billing Information – page 30

Supplies – page 33

Faults – page 34

1. Press the <Machine Status> button on the control panel.
Press the <Features> or <All Services> button at any time to exit.
2. Select the required option.

Machine Information

This section describes how to view general information about the machine, the status of paper trays and the hard disk, and how to change the print mode or fax receiving mode.

For more information on the features available, refer to the following.

Machine Information – page 29

Paper Tray Status – page 29

Overwrite Hard Disk – page 29

Print Mode – page 29

Fax Receiving Mode – page 30

1. Press the <Machine Status> button on the control panel.
2. Select the [Machine Information] tab.
3. Select the required option.

Machine Information

This feature allows you to view user support information and the serial number of the machine as well as the machine configuration and the software version.

1. Select [General Information] on the [Machine Information] screen.
2. Select the required option.
 - Machine Configuration – Displays the [Machine Configuration] screen. You can view the status of the machine components. The list displays the hardware components and the options supported on the machine.
 - Software Version – Displays the [Software Version] screen. You can identify the software versions of the components of the machine.

Paper Tray Status

This feature allows you to check the status of each paper tray, including the bypass tray and the optional High Capacity Tandem Tray. It also displays the size, type, and remaining amount of media in each tray.

1. Select [Paper Tray Status] on the [Machine Information] screen.

Overwrite Hard Disk

This feature displays the overwriting status of the hard disk.

NOTE: This option is displayed if the feature is enabled in the System Settings by the Key Operator.

1. Select [Overwrite Hard Disk] on the [Machine Information] screen.

Print Mode

This feature allows you to change the default printer mode and emulation parameter settings.

1. Select [Print Mode] on the [Machine Information] screen.
2. Select the required option.
 - Off-line – Takes the printer off-line. The printer is unavailable in this mode.
 - On-line – Puts the printer on-line, ready to accept data.
 - PCL Emulation – Allows you to set parameter values for PCL emulation to print documents.

- **HP-GL/2 Emulation** – Allows you to set parameter values for HP-GL/2 emulation to print documents. It also allows you to store, retrieve, and delete up to 20 emulation settings.
 - **Retrieve Programming** – Retrieves emulation settings and makes them active.
 - **Programming** – Allows you to set emulation parameter item values.
 - **Store/Delete Programming** – Allows you to store user-programmed emulation mode parameters on the machine.
 - **Default Programming** – Sets the default emulation mode settings when the machine is turned on.
- **PDF** – Allows you to set parameter values and a password for PDF direct printing.
 - **Setup** – Allows you to set emulation parameter item values for PDF direct printing.
 - **Password** – Allows you to enter a password to restrict access to PDF direct printing.

Fax Receiving Mode

This feature allows you to set the fax reception mode: Manual Receive or Auto Receive.

NOTE: This feature is available only when the Server Fax feature is enabled.

1. Select [Fax Receiving Mode] on the [Machine Information] screen.
2. Select the required option.

- **Manual Receive** – Starts receiving a fax or polling after you have answered the call and confirmed it is a fax.
- **Auto Receive** – Receives a fax automatically.

Billing Information

This section describes the features that allow you to view the billing meter information, and also specify the output sequence for various reports and lists.

1. Press the <Machine Status> button on the control panel.
2. Select the [Billing Information] tab.
3. Select the required option.

Billing Information

This feature allows you to view the total number of prints made on the machine using the [Current Meter Reading]. You can also view the serial number.

1. Select [Billing Information] on the [Billing Information] screen.
- **Machine Serial Number** – Displays the serial number of the machine.
 - **Current Meter Reading** – Displays the following current meter readings:

- Black Impressions – Displays the number of total black and white copies and prints.
- Color Impressions – Displays the number of total color copies and prints.
- Total Impressions – Displays the number of total copies and prints.

Print Reports

This feature allows you to print various reports and lists for each service.

- 1.** Select [Print Reports] on the [Billing Information] screen.
- 2.** Select the required option.
 - Job Status/Activity Report – Displays the [Job Status/Activity Report] screen. Select a report option and press the <Start> button on the control panel to print the report.
 - Job History Report – Lists the jobs recorded on the machine. The data for the last 200 jobs is printed. Print reports are available for [All Jobs], [Scan, Fax, & Internet Fax Jobs], [Mailbox Transfer Jobs], and [Printer & Print from Mailbox Jobs]. You can also specify [Include Child Jobs] when you select [All Jobs].
 - Activity Report – Lists activity results of incoming and outgoing communications.
 - Error History Report – Lists the 50 most recent errors that occurred in the machine.
 - Stored Document List – Lists the fax jobs queued on the machine.
 - Copy Reports – Displays [Copy Reports] screen. Select a report option and press the <Start> button on the control panel to print the report.
 - Configuration Report – Lists common settings, such as hardware configuration, network information, and print and copy feature settings.
 - Printer Reports – Displays the [Printer Reports] screen. Select a report option and press the <Start> button on the control panel to print the report.
 - Configuration Report – Lists common settings, such as hardware configuration, network information, and print and copy feature settings.
 - PCL Settings List
 - PCL Macro List
 - PDF Settings List
 - TIFF/JPEG Settings List
 - TIFF/JPEG Logical Printers List
 - PS Logical Printers List
 - HP-GL/2 Settings List
 - HP-GL/2 Logical Printers List
 - HP-GL/2 Palette List
 - Font List
 - PCL Font List
 - PostScript Font List

- Scan Reports – Displays the [Scan Reports] screen. Select a report option and press the <Start> button on the control panel to print the report.
 - Reports: [Configuration Report] – Lists common settings, such as hardware configuration, network information, and print and copy feature settings. [Scan/Fax Configuration Report] – Lists settings specific to fax and scan features. [Domain Filter List] – Lists domains registered for domain filtering.
 - Job Template List – Lists the job templates that can be used on the machine.
 - Address Book – Lists the contents of address books and relay stations for the 50-address selections on the right-hand side of the screen. Multiple selections are supported.
- Fax Reports – Displays the [Fax Reports] screen. Select a report option and press the <Start> button on the control panel to print the report.
 - Reports: [Configuration Report] – Lists common settings, such as hardware configuration, network information, and print and copy feature settings. [Mailbox Selector List] – Lists the settings for sorting into mailboxes. [Scan/Fax Configuration Report] – Lists settings specific to fax and scan features. [Domain Filter List] – Lists domains registered for domain filtering.
 - Address Book – Lists the contents of address books and relay stations for the 50-address selections on the right-hand side of the screen. Multiple selections are supported. Check boxes are available to select group send settings and to select all address numbers.
 - Fax Comments List – Lists the comments saved for use on cover notes.
 - Billing Data List – Lists the billing data for fax jobs.

NOTE: The Billing Data List option is displayed with Key Operator access.

- Mailbox List – Displays the [Mailbox List] screen. Select a report option and press the <Start> button on the control panel to print the report.
 - Mailbox List – Lists the mailbox settings and procedure when storing data in the mailbox.
- Job Counter Report – Displays the [Job Counter Report] screen. Select a report option and press the <Start> button on the control panel to print the report.
 - Job Counter Report – Lists the job counter reports for each feature.
- Auditron Reports – Displays the [Auditron Reports] screen. Select a report option and press the <Start> button on the control panel to print the report.

When Auditron is [Off]:

- Meter Report (Print Jobs) – Lists the number of pages printed per user and by all users, for color and monochrome jobs.

When Auditron is [On]:

- Auditron Report (Print) – Lists an Auditron report for all print jobs completed by the selected users.
- Auditron Report (Copy) – Lists an Auditron report for all copy jobs completed by the selected users.

- Auditron Report (Fax) – Lists an Auditron report for all fax jobs completed by the selected users.
- Auditron Report (Scan) – Lists an Auditron report for all scan jobs completed by the selected users.

NOTE: The Mailbox List, Job Counter Report, and Auditron Administration options are displayed with Key Operator access.

Automatically Printed Reports/Lists – This section describes the various reports and lists that can be printed automatically.

- Job History Report – Lists the last 50 jobs processed on the machine.
- Activity Report – Lists activity results of incoming and outgoing communications.
- Transmission Report - Job Undelivered – Lists undelivered documents and their transmission status.
- Transmission Report - Job Deleted – Lists transmissions cancelled by the user.
- Mailbox Report – Lists documents received into a mailbox.
- Broadcast/Multi-poll Report – Lists the results of multi-poll transmissions.
- Relay Broadcast Report – Lists the results of a relay broadcast when the broadcast ends.
- Scan File Transfer Report – Lists the results of scan file transfers.
- Fax Sever Report – Shows the results of Server Fax transmissions.
- Job Flow Error Report – Notifies a job flow error.
- Copy Activity Report – Shows the usage report of a user's completed copy service session.

User Account Billing Information

This feature displays the billing information of the currently logged-in user.

NOTE: This feature is available only when the [Machine Status] > [Tools] > [Accounting] > [Accounting Type] is set to [Local Accounting].

1. Select [Billing Information] on the [User Account Billing Information] screen.
 - Meter (Copy Jobs) – Displays the meter readings for copy jobs.
 - Meter (Scan Jobs) – Displays the meter readings for scan jobs.

Supplies

This feature allows you to view toner usage and the status of cartridges, and to change consumable supplies when required.

1. Press the <Machine Status> button on the control panel.
2. Select the [Supplies] tab.
3. Select the required option.

Faults

This feature allows you to print a report of recent errors, the date and time of the errors, the error codes, and the status of each error. The status is either active or cleared.

1. Press the <Machine Status> button on the control panel.
2. Select the [Faults] tab.
3. Select [Error History Report] and press the <Start> button on the control panel.

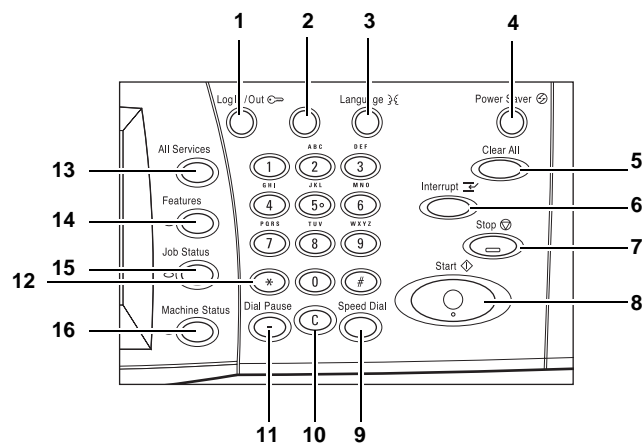
Tools

This feature allows the Key Operator to change various default presets on the machine, register mailboxes and job flow sheets, configure accounting and security options, and perform calibration.

1. Select the [Tools] tab on the [Machine Status] screen.
2. Select the required option.

System Controls

The following diagram shows the names and functions of the buttons on the control panel.



	Button	Function
1	<Log In/Out>	Displays the log-in screen to enter the Key Operator mode, or when the Authentication feature is enabled. DO NOT press this button again, after you have logged in. This will log you out after being prompted for confirmation.
2	<Help>	This button is non-functional on this machine.
3	<Language>	Changes the languages displayed on the touch screen. NOTE: Certain characters may be garbled when you change languages.

	Button	Function
4	<Power Saver> (green light)	Indicates whether the machine is in power saver mode. Also cancels the current power saver mode setting.
5	<Clear All>	Resets to the default settings and displays the first screen for the current pathway.
6	<Interrupt>	Temporarily interrupts a job for programming a priority job.
7	<Stop>	Suspends or cancels a job depending on the job type. When multiple jobs are being processed, all the jobs will be suspended or cancelled. Selecting [Stop] on the [Job Status] screen stops only the selected job.
8	<Start>	Starts or resumes a job.
9	<Speed Dial>	Enters speed dial codes.
10	<C>	Deletes a numeric value or the last digit entered, and replaces the current value with a default value. Also cancels suspended jobs.
11	<Dial Pause>	Inserts a pause while dialing a fax number.
12	<*(asterisk)>	Indicates the special character used in a fax number and designates a group code. Also allows you to specify an F Code or a password.
13	<All Services>	Displays the [All Services] screen for selection of all the available services on the machine.
14	<Features>	Returns the display to the previous copy, fax, or scan feature screen when the [Job Status] screen or [Machine Status] screen is selected.
15	<Job Status>	Displays the [Job Status] screen where you can check the progress of a job, or display the log and detailed information of completed jobs.
16	<Machine Status>	Displays the Machine Status screens where you can check the machine information, the billing information, and the status of the toner cartridges and other supplies, can print various reports, and can configure various settings.

Button names and icons used on the control panel may differ depending on the country of purchase.

Settings in the Key Operator Mode

This machine is pre-programmed with default settings which can be customized on the [Tools] tab in Machine Status. To access the setting menus, entering the Key Operator mode is required via the <Log In/Out> button. These settings may be accessed in the System Administrator mode as well.

NOTE: Entering the Key Operator mode is not required for [Setup & Calibration].

NOTE: The setting menus displayed on the screen depends on the machine configuration.

The following setup categories are available.

System Settings

- Common Service Settings
- Copy Service Settings
- Connectivity & Network Setup
- Print Service Settings
- Scan Service Settings
- Fax Service Settings
- E-mail/Internet Fax Settings
- Mailbox/Stored Document Settings
- Job Flow Service Settings
- Web Browser Settings

Setup & Calibration

- Setup
- Calibration

Accounting

- Create/View User Accounts
- Reset User Accounts
- System Administrator's Meter (Copy Jobs)
- Accounting Type
- Auto Reset of User Billing Information
- Copy Activity Report

Authentication/Security Settings

- System Administrator Settings
- Authentication
- Job Status Default

NOTE: CentreWare Internet Services is software that enables you to display, configure and change the settings of the machine by using a browser on a computer instead of the machine's control panel.

Printing a Configuration Report

Follow these steps to print a configuration report:

1. Press the <Machine Status> button on the control panel.
2. Select the [Billing Information] tab.
3. Select the [Print Reports].
4. Select the [Printer Reports].
5. Select the [Configuration Report].
6. Press the <Start> button on the control panel.

Changing the Settings

Follow these steps to enter the Key Operator mode, change settings, and exit the Key Operator mode.

NOTE: Entering the Key Operator mode is not required for [Setup & Calibration].

1. Entering the Key Operator Mode

1. Press the <Log In/Out> button on the control panel.
2. Enter the correct user ID using the numeric keypad on the control panel or the screen keyboard.

NOTE: The default Key Operator ID is “11111”. If the Authentication feature is enabled, you may also be required to enter a passcode. The default passcode is “x-admin”.

2. Setting a Feature

1. Press the <Machine Status> button on the control panel.
2. On the Machine Status screen, select the [Tools] tab.
3. Select a menu from the main menu displayed on the left side of the [Tools] tab.
4. Select a group in the menu.
5. Select a feature in the group, and then configure the feature.

NOTE: Some features display the [Change Settings] button. Select the button to change settings or to enter information using the screen keyboard.

6. Select [Close].

3. Exiting the Key Operator Mode

1. Press the <Log In/Out> button on the control panel.

2. If the [Logout] screen appears, select [Logout].
If the [Reboot Machine] screen appears, select [Reboot Now] to reflect the settings you made.

Ethernet Port

The Ethernet port is the default interface used on the machine.

If you need to change the speed setting of the Ethernet port, perform the following steps.

1. Enter the Key Operator mode.

NOTE: For details on how to enter the Key Operator mode, refer to “1. Entering the Key Operator Mode” on page 37.

2. Press the <Machine Status> button, and then select the [Tools] tab.
3. Under [System Settings], select [Connectivity & Network Setup].
4. Select [Protocol Settings].
5. Select [Ethernet Rated Speed] and [Change Settings].
6. Set up the port speed.
7. Select [Save].

Auto

Detects the transmission speed automatically at power on and adjusts itself accordingly.

100 Mbps Full-Duplex

Sets the transmission speed to 100 Mbps (Full Duplex).

100 Mbps Half-Duplex

Sets the transmission speed to 100 Mbps (Half-Duplex).

10 Mbps Full Duplex

Sets the transmission speed to 10 Mbps (Full Duplex).

10 Mbps Half-Duplex

Sets the transmission speed to 10 Mbps (Half-Duplex).

Resident Fonts

PCL Resident Fonts

One of the fonts in the following table can be selected as the default font for the machine. Other bitmap and scalable fonts can be downloaded with print jobs sent to the machine using print drivers. The default is used when a font is not defined in the PCL job stream. The PCL versions used are PCL5 and PCL6.

You can view the PCL fonts by printing the Fonts List.

Value	Description	Value	Description
0	CG Times	41	Times New Bold
1	CG Times Italic	42	Times New Bold Italic
2	CG Times Bold	43	Symbol
3	CG Times Bold Italic	44	Wingdings
4	Univers Medium	45	Line Printer
5	Univers Medium Italic	46	Times Roman
6	Univers Bold	47	Times Italic
7	Univers Bold Italic	48	Times Bold
8	Univers Medium Condensed	49	Times Bold Italic
9	Univers Medium Condensed Italic	50	Helvetica
10	Univers Bold Condensed	51	Helvetica Oblique
11	Univers Bold Condensed Italic	52	Helvetica Bold
12	Antique Olive	53	Helvetica Bold Oblique
13	Antique Olive Italic	54	CourierPS
14	Antique Olive Bold	55	CourierPS Oblique
15	CG Omega	56	CourierPS Bold
16	CG Omega Italic	57	CourierPS Bold Oblique
17	CG Omega Bold	58	SymbolPS
18	CG Omega Bold Italic	59	Palatino Roman
19	Garamond Antiqua	60	Palatino Italic
20	Garamond Kursiv	61	Palatino Bold
21	Garamond Halbfett	62	Palatino Bold Italic
22	Garamond Kursiv Halbfett	63	ITC Bookman Light

Value	Description	Value	Description
23	Courier (default)	64	ITC Bookman Light Italic
24	Courier Italic	65	ITC Bookman Demi
25	Courier Bold	66	ITC Bookman Demi Italic
26	Courier Bold Italic	67	Helvetica Nscroll
27	Letter Gothic	68	Helvetica Nscroll Oblique
28	Letter Gothic Italic	69	Helvetica Nscroll Bold
29	Letter Gothic Bold	70	Helvetica Nscroll Bold Oblique
30	Albertus Medium	71	New Century Schoolbook Roman
31	Albertus Extra Bold	72	New Century Schoolbook Italic
32	Clarendon Condensed	73	New Century Schoolbook Bold
33	Coronet	74	New Century Schoolbook Bold Italic
34	Marigold	75	ITC Avant Garde Book
35	Arial	76	ITC Avant Garde Book Oblique
36	Arial Italic	77	ITC Avant Garde Demi
37	Arial Bold	78	ITC Avant Garde Demi Oblique
38	Arial Bold Italic	79	ITC Zapf Chancery Medium Italic
39	Times New	80	ITC Zapf Dingbats
40	Times New Italic		

Symbol Set

One of the following symbol sets can be selected as the default symbol set. The default symbol set is used when a symbol set is not defined in the PCL job stream.

Code	Value	Short Display	Long Display
8U	277	ROMAN-8	Roman 8 (default)
0N	14	ISO L1	ISO 8859-1 Latin 1
2N	78	ISO L2	ISO 8859-2 Latin 2
5N	174	ISO L5	ISO 8859-9 Latin 5
6N	206	ISO L6	ISO 8859-10 Latin 6
10U	341	PC-8	PC-8
11U	373	PC-8 DN	PC-8 DN

Code	Value	Short Display	Long Display
26U	853	PC-775	PC-775
12U	405	PC-850	PC-850
17U	565	PC-852	PC-852
9J	298	PC-1004	PC-1004 (OS/2)
9T	308	PC-8 TK	PC Turkish
19U	629	WIN L1	Windows 3.1 Latin 1
9E	293	WIN L2	Windows 3.1 Latin 2
5T	180	WIN L5	Windows 3.1 Latin 5
7J	234	DESKTOP	DeskTop
10J	330	PS TEXT	PS Text
12J	394	MC TEXT	MC Text
6J	202	MS PUB	Microsoft Publishing
8M	269	MATH-8	Math 8
5M	173	PS MATH	PS Math
15U	501	PI FONT	Pi Font
1U	53	LEGAL	Legal
1E	37	ISO-4	ISO 4 United Kingdom
0U	21	ISO-6	ISO 6 ASCII
0S	19	ISO-11	ISO 11 Swedish:names
0I	9	ISO-15	ISO 15 Italian
2S	83	ISO-17	ISO 17 Spanish
1G	39	ISO-21	ISO 21 German
0D	4	ISO-60	ISO 60 Norwegian v1
1F	38	ISO-69	ISO 69 French
9U	309	WIN 3.0	Windows 3.0 Latin 1
19L	620	WINBALT	Windows Baltic
19M	621	SYMBOL	Symbol
579L	18540	WINGDINGS	Wingdings

3 Windows TCP/IP

This chapter explains how to set up the machine to operate in a Windows TCP/IP environment. The following information is provided.

Quick Network Setup (DHCP) – page 43

Quick Network Setup (Static IP) – page 44

Quick Network Setup (DHCP)

Prerequisites for Quick Network Setup Using TCP/IP

1. Confirm that an existing operational network utilizing TCP/IP is available.
2. Confirm that the Ethernet cable is plugged into the multifunction machine and into an operational Ethernet port on the network.

NOTE: The Ethernet cable is an RJ45 type and is not supplied by Xerox.

Configuring an IP Address via DHCP

On startup, the multifunction device defaults to DHCP to obtain its network configurations. A DHCP server delivers an IP address, as well as other configuration settings to the machine. If you use a DHCP server to allocate an IP address to the machine, then proceed as follows:

Procedure for Quick Network Setup Using TCP/IP

1. Power on the machine.
2. Wait a minute or so while the machine negotiates an IP address.
3. To print the Configuration Report:
 - a) Select the <Machine Status> button on the machine.
 - b) On the [Billing Information] screen, select [Print Reports].
 - c) Select [Printer Reports].
 - d) Select [Configuration Report].
 - e) Press the <Start> button on the machine.
4. Read the Configuration Report to confirm that an IP address has been allocated and that it is a valid IP address on your network.

NOTE: If the IP address starts with 169.xxx.xxx.xxx, then the DHCP server has not properly allocated an address or DHCP is not enabled on your network.

5. Record the IP address allocated.
6. From a workstation, open a web browser (such as Internet Explorer), and then enter the machine's IP address. If connected properly, you should see a CentreWare Internet Services web page for your machine.

NOTE: CentreWare Internet Services is a powerful tool for configuring the machine remotely. The default user name is "11111" and the passcode is "x-admin". The user name and passcode are case sensitive and should be changed after install.

7. Load the print drivers on the workstations that will be accessing the machine.

Quick Network Setup (Static IP)

Prerequisites for Manual Setup of Network Using Static IP Address

NOTE: On startup, the WorkCentre multifunction machine defaults to DHCP to obtain its network configurations, so DHCP must be turned off by manually entering a static IP address.

Before installing, record the following information for use during setup:

TCP/IP Address:

Gateway Address:

Subnet Mask (for IPv4) / Prefix (for IPv6):

DNS Server Address:

NOTE: To obtain this information, contact your System Administrator.

Procedure for Manual Setup of Network Using Static IP Address

1. Power on the machine.
 2. Press the <Log In/Out> button on the control panel, and then type the Key Operator login ID to enter the Key Operator mode.
- NOTE:** The passcode may also be required depending on the machine configuration.
3. Press the <Machine Status> button on the control panel, and then select the [Tools] tab on the screen.
 4. Select [System Settings].
 5. Select [Connectivity & Network Setup].
 6. Select [Protocol Settings].
 7. Under [TCP/IP - IP Mode], select [IPv4 Mode], [IPv6 Mode], or [Dual Stack].

When [IPv4 Mode] or [Dual Stack] is selected

- 8.** Select [IP Address Resolution], and then [Change Settings].
- 9.** Select [STATIC], and then select [Save].
- 10.** Select [IPv4 - IP Address], and then [Change Settings].
- 11.** Use the keypad on the screen to enter the IP Address for the machine in the format "xxx.xxx.xxx.xxx". Select [Save].
- 12.** Select [IPv4 – Subnet Mask], and then [Change Settings].
- 13.** Using the same method as in step 11, enter the Subnet Mask.
- 14.** Select [IPv4 – Gateway Address], and then [Change Settings].

NOTE: If you do not wish to set the Gateway Address, leave this field blank.

- 15.** To enable IPv4 – IP Filtering, use CentreWare Internet Services to register the IP addresses which will not be allowed to access the machine.

NOTE: If you enable IP Filtering at the machine user interface without first configuring it through Internet Services, then you will not be able to access the machine's Internet Services web page or print to the machine.

- 16.** When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

When [IPv6 Mode] or [Dual Stack] is selected

- 8.** Set [IPv6 Address Manual Configuration] to [Enabled].
- 9.** Select [IPv6 – Manual IP Address Setup], and then [Change Settings].
- 10.** Use the keypad on the screen to enter the IP Address for the machine in the format "xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx". Select [Save].
- 11.** Select [Manually Configured IPv6 Prefix], and then [Change Settings].
- 12.** Set the IP address prefix, and then select [Save].
- 13.** Select [IPv6 – Manual Gateway Setup], and then [Change Settings].
- 14.** To enable IPv6 – IP Filtering, use CentreWare Internet Services to register the IP addresses which will not be allowed to access the machine.

NOTE: If you enable IP Filtering at the machine user interface without first configuring it through Internet Services, then you will not be able to access the machine's Internet Services web page or print to the machine.

- 15.** When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

4 CentreWare Internet Services

This chapter explains how to enable and use the CentreWare Internet Services feature of the machine. The following information is provided.

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CentreWare Internet Services Environments – page 48

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Using CentreWare Internet Services to Configure Settings on the Machine – page 53

Information Checklist

Before enabling the CentreWare Internet Services feature, make sure that the following items are available or have been performed.

Item	By
An existing operational workstation with TCP/IP Internet or intranet accessibility is required. These procedures are not intended to install the TCP/IP stack itself.	Customer
Obtain and record the following information: <ul style="list-style-type: none">• A Unique IP Address• Gateway Address• Subnet Mask (for IPv4) / Prefix (for IPv6) Refer to the glossary for additional information about the Gateway Address and Subnet Mask, if needed.	Customer
Test the machine to make sure that it is installed fully and functioning correctly.	Customer

If problems are encountered during the installation of the machine, refer to *the Problem Solving chapter* for assistance.

CentreWare Internet Services Environments

CentreWare Internet Services uses the embedded HTTP Server on the machine. This allows communication with the machine through a Web browser with access to the Internet or intranet. By entering the IP Address of the machine as the URL (Universal Resource Locator) in the browser, direct access to the machine is available.

CentreWare Internet Services allows you to make not only the same basic settings as from the control panel, but also more specialized settings for the machine.

User ID and Passcode

Many of the features available within Internet Services will require an admin user name and passcode. The default user name is "11111" and the default passcode is "x-admin". This ID and passcode can be changed by the Key Operator. A user will only be prompted for an admin name and passcode once in a single browser session.

System Configuration

To use CentreWare Internet Services, you need to enable TCP/IP on the machine.

Target Computers

The OS and browsers that can be used for CentreWare Internet Services are as follows.

OS	Browsers
Windows 2000 Pro	Internet Explorer 6.0 SP1 Netscape 7.1 Navigator
Windows XP Pro	Internet Explorer 6.0 SP1 Netscape 7.1 Navigator Mozilla Firefox 1.5
Windows Vista	Internet Explorer 7.X
Mac OS 9.2	Netscape 7.02 Navigator
Mac OS X 10.x	Netscape 7.1 Navigator Safari 1.3

CentreWare Internet Services Installation

This section describes the settings required to use CentreWare Internet Services.

Installation Procedure

There are two stages required to enable CentreWare Internet Services.

Network Communication Setup

This requires the machine to be set up for CentreWare Internet Services.

Test Access

To make sure that CentreWare Internet Services has been set up correctly, you should access CentreWare Internet Services.

Network Communication Setup

Initially, boot the CentreWare Internet Services port.

1. Connect the machine to the network.
2. Press the <Log In/Out> button on the control panel, and then type the Key Operator login ID to enter the Key Operator mode.

NOTE: The passcode may also be required depending on the machine configuration.

3. Press the <Machine Status> button on the control panel, and then select the [Tools] tab on the screen.
4. Select [System Settings].
5. Select [Connectivity & Network Setup].
6. Select [Port Settings].
7. Select [Internet Services (HTTP)] and [Change Settings].
8. Select [Port Status] and [Change Settings].
9. Select [Enabled] and [Save].

Set port number 80 for CentreWare Internet Services, if required.

10. At the [Internet Services (HTTP)] screen, select [Internet Services Port Number] and [Change Settings].
11. Use the keypad to enter the port number, and select [Save].

Next, establish TCP/IP

1. In [Connectivity & Network Setup], select [Protocol Settings].
2. Under [TCP/IP - IP Mode], select [IPv4 Mode], [IPv6 Mode], or [Dual Stack].

When [IPv4 Mode] or [Dual Stack] is selected

3. Select [IP Address Resolution], and then [Change Settings].
4. Select a method for establishing an IP address from [DHCP], [BOOTP], [RARP], [DHCP/Autonet], and [STATIC], and then select [Save].

NOTE: Use the DHCP server together with the Windows Internet Name Server (WINS) server.

If you selected [STATIC] in step 4, then proceed to step 5 to configure the protocol settings. Otherwise, proceed to step 11.

5. Select [IPv4 - IP Address], and then [Change Settings].
6. Use the keypad on the screen to enter the IP Address for the machine in the format "xxx.xxx.xxx.xxx". When you have finished entering all values, select [Save].
7. Select [IPv4 – Subnet Mask], and then [Change Settings].
8. Using the same method as in step 6, enter the Subnet Mask.
9. Select [IPv4 – Gateway Address], and then [Change Settings].

NOTE: If you do not wish to set the gateway address, leave this field blank.

10. Using the same method as in step 6, enter the Gateway Address.

11. Select [IPv4 – IP Filter], and then [Change Settings].

12. Select [Enabled] to filter access to the machine.

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

13. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

When [IPv6 Mode] or [Dual Stack] is selected

3. Set [IPv6 Address Manual Configuration].

NOTE: Select [Enabled] when the machine is connected to a network on which IPv6 stateless address autoconfiguration is disabled, or when you want to set a static IPv6 address.

If you selected [Enabled] in step 3, proceed to step 4. Otherwise, proceed to step 10.

4. Select [IPv6 – Manual IP Address Setup], and then [Change Settings].
5. Use the keypad on the screen to enter the IP Address for the machine in the format "xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx". Select [Save].
6. Select [Manually Configured IPv6 Prefix], and then [Change Settings].
7. Set the IP address prefix, and then select [Save].
8. Select [IPv6 – Manual Gateway Setup], and then [Change Settings].
9. Using the same method as in step 5, set the gateway address.
10. Select [IPv6 – IP Filter], and then select [Enabled] or [Disabled].

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

11. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

Test Access

Follow the steps below to access CentreWare Internet Services.

1. At a client workstation on the network, launch an Internet browser.
2. In the URL field, enter “http://” followed by the Internet address of the machine. Then press the <Enter> key on the keyboard.

NOTE: If you enter the IP address, use one of the following formats depending on your machine configuration. The IPv6 format is supported on Windows Vista only. It needs to be enclosed in square brackets.

(For IPv4) http://xxx.xxx.xxx.xxx

(For IPv6) http://[xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx]

NOTE: If a port number is set, append it to the Internet address as follows. In the following example, the port number is 80. The IPv6 format is supported on Windows Vista only. It needs to be enclosed in square brackets.

(For IPv4) http://xxx.xxx.xxx.xxx:80

(For IPv6) http://[xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx]:80

3. Verify that the home page of CentreWare Internet Services is displayed

The CentreWare Internet Services installation process is now completed.

If the test fails, refer to *the Problem Solving chapter* for assistance.

NOTE: If the Auditron feature is enabled, you may be required to enter the user ID and passcode (if one is set up). If you need assistance, contact the Key Operator.

NOTE: When your access to CentreWare Internet Services is encrypted, enter “https://” followed by the Internet address, instead of “http://”.

Selecting Transport Protocols

When using the NetWare, SMB, or SNMP port, change the transport protocol if required.

- NetWare: IPX/SPX, TCP/IP
- SMB: TCP/IP
- SNMP: UDP, IPX

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the [Connectivity] folder, then select [Port Settings].
3. Select the required transport protocol.

NetWare: IPX/SPX, TCP/IP

SMB: TCP/IP

SNMP: UDP, IPX

4. Select [Apply].

5. Enter the user ID and passcode, then select [OK].

NOTE: The default user ID is “11111” and the default passcode is “x-admin”.

6. When the reboot message appears, select [Reboot Machine].

Using CentreWare Internet Services to Configure Settings on the Machine

This section provides the full listing of the items that can be set for each port through CentreWare Internet Services.

To access each setting page on CentreWare Internet Services, click the [Properties] tab, and then select [Connectivity].

NOTE: The following port names are displayed on the screen when the respective ports are activated. To activate a port through CentreWare Internet Services, select [Properties] > [Connectivity] > [Port Settings], and then the required port.

Ethernet – page 53

USB – page 54

SSDP – page 62

Microsoft Networking – page 63

LPD – page 64

Port 9100 – page 65

SMTP Server – page 66

LDAP – page 67

POP3 Setup – page 69

HTTP – page 70

Proxy Server – page 71

IPP – page 72

IPP – page 72

WebDAV – page 73

Bonjour – page 74

WSD – page 74

Ethernet

This page allows you to configure the Ethernet settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
3. Select the plus symbol [+] to the left of the [Physical Connections] folder.
4. Select [Ethernet].
5. Set up the following displayed in the frame.
 - Rated Speed – Select the Ethernet transmission format.

- MAC Address – Displays the MAC address of the machine. This is a display-only item.

6. Select [Apply] to reflect the new settings.

7. Enter the user ID and passcode and then select [OK].

NOTE: The default user ID is "11111" and the default passcode is "x-admin".

8. When the reboot message appears, select [Reboot Machine].

USB

This page allows you to configure the USB settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
 2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
 3. Select the plus symbol [+] to the left of the [Physical Connections] folder.
 4. Select [USB].
 5. Set up the following displayed in the frame.
 - Auto Eject Time – Allows you to specify the time when the paper will be automatically ejected from the printer if no data are sent to the printer.
 - Adobe Communication Protocol - This is only available when the optional PostScript Kit is installed. Select one of the following options:
 - Normal – Select this when the communication protocol is in ASCII format.
 - Binary – Select this when the communication protocol is in binary format.
 - TBCP – Select this to switch between the specific control codes when the communication protocols involve both ASCII and binary formats.
 - RAW – Select this when the communication protocol is in RAW format.
 6. Select [Apply] to reflect the new settings.
 7. Enter the user ID and passcode and then select [OK].
- NOTE:** The default user ID is "11111" and the default passcode is "x-admin".
8. When the reboot message appears, select [Reboot Machine].

EtherTalk

This is only displayed when PostScript Kit is installed. This page allows you to configure the EtherTalk settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
 2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
 3. Select the plus symbol [+] to the left of the [Protocols] folder.
 4. Select [EtherTalk].
 5. Set up the following displayed in the frame.
 - Protocol – Displays whether the protocol is enabled or disabled.
 - Physical Connection – Displays “Ethernet”. This is a display-only item.
 - Printer Name – Enter the printer name for EtherTalk.
 - Printer Type – Displays the printer type.
 - Zone Name – Enter the EtherTalk zone name.
 6. Select [Apply] to reflect the new settings.
 7. Enter the user ID and passcode and then select [OK].
- NOTE:** The default user ID is "11111" and the default passcode is "x-admin".
8. When the reboot message appears, select [Reboot Machine].

NetWare

This page allows you to configure the NetWare settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
3. Select the plus symbol [+] to the left of the [Protocols] folder.
4. Select [NetWare].
5. Set up the following displayed in the frame.

General:

 - Protocol – Displays whether the protocol is enabled or disabled.
 - Physical Connection – Displays “Ethernet”. This is a display-only item.

- Network Address – Displays the network address in the xxxxxxxx:xxxxxxxxxxxx format.
- Filing Transport – Displays whether two transport protocols, IPX/SPX and TCP/IP, are enabled or disabled.
- Frame Type – Select the frame type.
 - Auto: Automatically configures the active frame type.
 - Ethernet II: Selects Ethernet frame type.
 - Ethernet 802.3: Selects IEEE802.3 frame type.
 - Ethernet 802.2: Selects IEEE802.3/IEEE802.2 frame type.
 - Ethernet SNAP: Selects IEEE802.3/IEEE802.2/SNAP frame type.
- Queue Poll Interval – Allows you to set the time interval from when print data enters the print queue until printing starts.
- Printer Server Name – Enter the printer server (PServer) name.
- New Print Server Password – Enter the PServer password.
- Retype New Print Server Password – Re-enter the PServer password for verification.
- Active Mode – Select the Active Mode for the machine when using NetWare.
 - Bindery: PServer Mode: Select this when using the machine server mode in bindery service.
 - Directory: PServer Mode: Select this when using the machine server mode in directory service.
- Number of searches – Enter the maximum number of searches.
- TBCP Filter – Select the check box to enable TBCP Filter when processing PostScript data. This is available only when the optional PostScript kit is installed. When the transmission data includes binary or EPS data, disable this feature.

Service Advertising Protocol (SAP):

- Protocol – Displays “Enabled”. This is a display-only item.
- SAP Frequency – Displays “60 seconds”. This is a display-only item.

Bindery Settings:

- File Server Name – Enter the NetWare file server name.

NetWare Directory Services (NDS):

- NDS Tree – Enter the tree name.
- NDS Context – Enter the context name of the Print Server.

There are two ways to type the name: typeable (OU, O, etc.) and typeless. The user must use the typeable name in order for it to work.

Example: ou=xxxx.o=yyyy.c=zzzzz

SLP:

- Active Discovery – Allows you to enable or disable the automatic detection of the SLP directory agent.

6. Select [Apply] to reflect the new settings.

7. Enter the user ID and passcode and then select [OK].

NOTE: The default user ID is "11111" and the default passcode is "x-admin".

8. When the reboot message appears, select [Reboot Machine].

TCP/IP

This page allows you to configure the following TCP/IP settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
3. Select the plus symbol [+] to the left of the [Protocols] folder.
4. Select [TCP/IP].
5. Set up the following displayed in the frame.

IP Mode:

- IP Mode – Select an IP mode from [IPv4], [IPv6], and [Dual Stack].

General:

- Protocol – Displays whether the protocol is enabled or disabled.
- Physical Connection – Displays "Ethernet". This is a display-only item.
- Host Name – Enter the host name. If you change the host name of TCP/IP, the host name of SMB also changes.

IPv4:

- IP Address Resolution – Allows you to set the method for obtaining the IPv4 address by selecting the drop down menu to access the following options.
 - STATIC: The user will specify all the addresses.
 - DHCP: The address will automatically be set via DHCP.
 - BOOTP: The address will automatically be set via BOOTP.
 - RARP: The address will automatically be set via RARP.
 - DHCP/Autonet: The address will be automatically set by Autonet via DHCP.

- IP Address – Enter the IP address allocated to the machine in the xxx.xxx.xxx.xxx format.
- Subnet Mask – Enter the subnet mask in the xxx.xxx.xxx.xxx format.
- Gateway Address – Enter the gateway address in the xxx.xxx.xxx.xxx format.

IPv6:

- Enable Manual Address – Select the check box to manually enter the IPv6 address and gateway address.
- IP Address – Enter the IPv6 address in the xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx format.
- Automatically Configured Address 1 - 3 – Displays the automatically configured IPv6 global unicast addresses.
- Link-Local Address – Displays the automatically configured IPv6 link local address.
- Gateway Address – Enter the gateway address in the xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx format.
- Automatically Configured Gateway Address – Displays the automatically configured gateway address.

Domain Name:

- Domain Name – Enter the domain name.

DNS Configuration:

IPv4:

- DHCP Address Resolution – Allows you to enable or disable the automatic setting of the IPv4 DNS server address via DHCP.
- Preferred DNS Server – Enter the IPv4 address for the DNS domain primary server.
- Alternate DNS Server 1 - 2 – Enter the IPv4 addresses for the DNS domain alternate server 1 and 2.

IPv6:

- DHCPv6-lite Address Resolution – Allows you to enable or disable the automatic setting of the IPv6 DNS server.
- Preferred DNS Server – Enter the IPv6 address for the DNS domain primary server address.
- Alternate DNS Server 1 - 2 – Enter the IPv6 addresses for the DNS domain alternate server 1 and 2.
- Dynamic DNS Registration (IPv4) – Specify whether to enable dynamic DNS server updates and/or to overwrite DNS settings upon updates.
- Dynamic DNS Registration (IPv6) – Specify whether to enable dynamic DNS server updates and/or to overwrite DNS settings upon updates.
- Generate Domain Search List Automatically – Select whether or not to automatically generate the domain search list.

- Domain Name 1 - 3 – Enter the domain names for the domain name 1 to 3.
- Connection Time-Out – Specify the maximum time period allowed for searching domains.
- DNS Resolution via IPv6 First – Select whether or not to prioritize the resolution of the IPv6 DNS name over the IPv4 DNS name when [IP Mode] is set to [Dual Stack].

DHCP/DDNS:

- Release Registration – Allows DHCP resources to be released when the machine is powering down. This is a display-only item and shows “Enabled”.

Zero-configuration Networking:

- Self Assigned Address (IPv4) – Allocates an IPv4 address without using a DHCP server. This check box is selected when [IP Address Resolution] is set to [Autonet]. This is a display-only item.
- Self Assigned Address (IPv6) – Displays “Enabled”. This is a display-only item.

6. Select [Apply] to reflect the new settings.

7. Enter the user ID and passcode and then select [OK].

NOTE: The default user ID is "11111" and the default passcode is "x-admin".

8. When the reboot message appears, select [Reboot Machine].

SNMP Configuration

This page allows you to configure the SNMP settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

- 1.** At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
- 2.** In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
- 3.** Select the plus symbol [+] to the left of the [Protocols] folder.
- 4.** Select [SNMP Configuration].
- 5.** Set up the following displayed in the frame.

SNMP Properties:

- Enable SNMP v1/v2c Protocols – Allows you to enable or disable the SNMP v1/v2c protocols.
- Edit SNMP v1/v2c Properties – Displays a page which allows you to set the following SNMP v1/2c properties.

Community Names:

- Community Name (Read Only): Enter the community name used for display.

- Community Name (Read/Write): Enter the community name used for display and update.

Default Trap Community Name:

- TRAP Community Name: Enter the trap notification community name.

System Administrator's Login ID:

- System Administrator's Login ID: Enter the name of the Key Operator.
- Enable SNMP v3 Protocol – Allows you to enable or disable the SNMP v3 protocol.
- Edit SNMP v3 Properties – Displays a page which allows you to set the following SNMP v3 properties. This button is active only when the Secure HTTP (SSL) feature is enabled.

Administrator Account:

- Account Enabled: Select to enable the Key Operator's account.
- User Name: Displays the user name of the Key Operator.
- Authentication Password (minimum 8 characters): Enter the authentication password using 8 to 32 characters.
- Confirm Authentication Password – Re-enter the authentication password for verification.
- Privacy Password (minimum 8 characters): Enter the privacy password using 8 to 32 characters.
- Confirm Privacy Password: Re-enter the privacy password for verification.

Print Drivers/Remote Clients Account:

- Account Enabled: Select the check box to enable the print drivers/remote clients account. This account allows client computers and drivers a limited access to the features on the machine. If the machine does not have SNMP v1/v2c enabled, and does not have this account enabled, SNMP clients will not be able to communicate with the machine. The default passwords should be used, unless the passwords have been changed on client computers.
- Reset to default Password – Click this button to reset your password to the default.
- Advanced – Displays a page that contains the [Add UDP IPv4], [Add UDP IPv6 Address], [Add IPX Address], and [Delete] buttons.
- Add UDP IPv4 Address: This button displays the [SNMP Configuration - IPv4] page, which allows you to set the following settings.

IP Trap Destination Address:

- IP Address: Enter the IPv4 address of the SNMP agent that you are setting up to receive traps.
- UDP Port Number: Enter the UDP port number of the SNMP agent.
- SNMP Version: Select the SNMP version of the SNMP agent.

Traps:

- TRAP Community Name: Enter the trap community name of the SNMP agent.
- Trap to be Received: Select the types of traps to receive from the SNMP agent.
- Add UDP IPv6 Address: This button displays the [SNMP Configuration - IPv6] page, which allows you to set the following settings.

IP Trap Destination Address:

- IP Address: Enter the IPv6 address of the SNMP agent that you are setting up to receive traps.
- UDP Port Number: Enter the UDP port number of the SNMP agent.
- SNMP Version: Select the SNMP version of the SNMP agent.

Traps:

- TRAP Community Name: Enter the trap community name of the SNMP agent.
- Trap to be Received: Select the types of traps to receive from the SNMP agent.
- Add IPX Address: This button displays a page that allows you to set the following settings.

IPX Trap Destination Address:

- IPX External Network Number: Enter the IPX external network number of the SNMP agent you are setting up to receive traps.
- Physical MAC Address: Enter the physical MAC address of the SNMP agent.
- IPX Socket Number: Enter the IPX socket number of the SNMP agent.
- SNMP Version: Select the SNMP version of the SNMP agent.

Traps:

- TRAP Community Name: Enter the trap community name of the SNMP agent.
- Trap to be Received: Select the types of traps to receive from the SNMP agent.
- Delete: Selecting a trap on the [SNMP Configuration > Advanced] page and clicking this button deletes the trap. You can select and delete multiple traps at once.

6. Select [Apply] to reflect the new settings.

7. Enter the user ID and passcode and then select [OK].

NOTE: The default user ID is "11111" and the default passcode is "x-admin".

8. When the reboot message appears, select [Reboot Machine].

SSDP

This page allows you to configure the SSDP settings.

NOTE: SSDP is available only after UPnP is enabled.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
 2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
 3. Select the plus symbol [+] to the left of the [Protocols] folder.
 4. Select [SSDP].
 5. Set up the following displayed in the frame.
 - Protocol – Displays whether the protocol is enabled or disabled.
 - Valid Advertising Period – Specify the time during which the advertising period remains valid.
 - Maximum TTL – Specify the maximum TTL (time to live).
 6. Select [Apply] to reflect the new settings.
 7. Enter the user ID and passcode, and then select [OK].
- NOTE:** The default user ID is "11111" and the default passcode is "x-admin".
8. When the reboot message appears, select [Reboot Machine].

Microsoft Networking

This page allows you to configure the Microsoft Networking settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
3. Select the plus symbol [+] to the left of the [Protocols] folder.
4. Select [Microsoft Networking].
5. Set up the following displayed in the frame.

Filing Destination:

- Protocol – Displays whether the protocol is enabled or disabled.
- Physical Connection – Displays “Ethernet”. This is a display-only item.
- Transport – Select a transport protocol [TCP/IP].
- Maximum Connections – Enter the maximum number of simultaneous connections allowed.
- Connection Timeout – Displays “600 seconds”. This is a display-only item.
- Workgroup – Enter the name of the workgroup the machine belongs.
- SMB Host Name – Enter the SMB host name with up to 32 characters.
- TBCP Filter – Select the check box to enable TBCP Filter when processing PostScript data. This is available only when the optional PostScript kit is installed. When the transmission data includes binary or EPS data, disable this feature.
- Unicode Support – Specify whether or not to support Unicode support in the host name and workgroup name during SMB transmission.
- Auto Master Mode – Allows you to enable or disable Auto Master Mode.
- Password Encryption – Allows you to enable or disable password encryption during SMB transmission.

WINS Server

Server Information:

- Protocol – Displays whether the protocol is enabled or disabled.
- Obtain WINS Server Address Automatically – Select whether to obtain the WINS server address via DHCP. The check box can be selected only when obtaining the TCP/IP address via [DHCP] or [DHCP/Autonet].
- Primary Server IP Address & Port – Displays the primary server WINS IP address when [Obtain WINS Server Address Automatically] is disabled. Change the address as necessary.

- Secondary Server IP Address & Port – Displays the secondary server WINS IP address when [Obtain WINS Server Address Automatically] is disabled. Change the address as necessary.

6. Select [Apply] to reflect the new settings.

7. Enter the user ID and passcode and then select [OK].

NOTE: The default user ID is "11111" and the default passcode is "x-admin".

8. When the reboot message appears, select [Reboot Machine].

LPD

This page allows you to configure the LPD settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
3. Select the plus symbol [+] to the left of the [Protocols] folder.
4. Select [LPD].
5. Set up the following displayed in the frame.
 - Protocol – Displays whether the protocol is enabled or disabled.
 - Physical Connection – Displays "Ethernet".
 - Port Number – Allows you to configure the port number.
 - TBCP Filter – Select the check box to enable TBCP Filter when processing PostScript data. This is available only when the optional PostScript kit is installed. When the transmission data includes binary or EPS data, disable this feature.
 - Connection Time-Out – Allows you to specify the connection time-out period when transmission fails.
 - Maximum Number of Sessions – Enter the maximum number of sessions.

6. Select [Apply] to reflect the new settings.

7. Enter the user ID and passcode and then select [OK].

NOTE: The default user ID is "11111" and the default passcode is "x-admin".

8. When the reboot message appears, select [Reboot Machine].

Port 9100

This page allows you to configure the Port9100 settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
3. Select the plus symbol [+] to the left of the [Protocols] folder.
4. Select [Port 9100].
5. Set up the following displayed in the frame.

General:

- Protocol – Displays whether the protocol is enabled or disabled.
- Physical Connection – Displays “Ethernet”. This is a display-only item.

Port Information:

- TCP Port Number – Enter the port number for Port 9100.
- Bidirectional – Displays whether the bidirectional communication is enabled or disabled.
- Maximum Connections per Port – Displays “8”. This is a display-only item.
- End of Job Timeout – Allows you to specify the connection time-out period when transmission fails.
- PDL Switching – Displays whether the PDL Switching feature is enabled or disabled. This is a display-only item.
- TBCP Filter – Select the check box to enable TBCP Filter when processing PostScript data. This is available only when the optional PostScript kit is installed. When the transmission data includes binary or EPS data, disable this feature.

6. Select [Apply] to reflect the new settings.
7. Enter the user ID and passcode and then select [OK].

NOTE: The default user ID is "11111" and the default passcode is "x-admin".

8. When the reboot message appears, select [Reboot Machine].

SMTP Server

This page allows you to configure the SMTP server settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
3. Select the plus symbol [+] to the left of the [Protocols] folder.
4. Select [SMTP Server].
5. Set up the following displayed in the frame.

Required Information:

- SMTP Server IP Address/Host Name & Port – In the first text box, enter the SMTP server address with up to 128 characters. In the second text box, enter the SMTP port number.
- WorkCentre E-mail Address – Enter the e-mail address of the machine.

Optional Information:

- Maximum Message Size (Message & Attachment) – Allows you to specify the maximum e-mail size.
 - Maximum Number of Pages per Split Send – Allows you to set the size of outgoing e-mail in pages.
 - Login Credentials for the WorkCentre to access the SMTP Server to send automated emails – Specify the SMTP server authentication method.
 - Login Name – Specify the login name for SMTP authentication.
 - Password – Specify the password for SMTP authentication.
 - Retype Password – Re-enter the password for verification.
6. Select [Apply] to reflect the new settings.
 7. Enter the user ID and passcode and then select [OK].
- NOTE:** The default user ID is "11111" and the default passcode is "x-admin".
8. When the reboot message appears, select [Reboot Machine].

LDAP

This page allows you to configure the LDAP settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
3. Select the plus symbol [+] to the left of the [Protocols] folder.
4. Select the plus symbol [+] to the left of the [LDAP] folder.
5. Select [LDAP Server], [LDAP User Mappings], [LDAP Authentication], [LDAP Group Access], or [Custom Filters].
6. Set up the following, as displayed in the frame.

LDAP Server

Server Information:

- IP Address/Host Name & Port – In the first text box, enter the server name or IP address of the primary LDAP server in IPv4 or IPv6 format. In the second text box, enter the port number of the primary LDAP server.
- Backup IP Address/Host Name & Port – In the first text box, enter the server name or IP address of the secondary LDAP server in IPv4 or IPv6 format. In the second text box, enter the port number of the secondary LDAP server.
- Server Application – Select a directory application from [Microsoft Active Directory], [Novell NetWare], [IBM Lotus Domain 6], and [Other Applications].

Optional Information:

- Search Root Entry DN – Enter a distinguished name that represents the search start point. Up to 255 characters can be used.
- Search Login Name – Enter the login name of the LDAP server that requires authentication. Up to 128 characters can be used.
- Search Password – Enter the password for the search login name using up to 32 characters. If the server does not require authentication, or a password is not required upon authentication, leave this text box blank.
- Re-enter Search Password – Re-enter the password for verification.
- Maximum Number of Search Results – Specify the maximum number of search result entries.
- Search Time-Out – Specify whether the server timeout limit will be used, or how many seconds the search should last.
- Referral – Allows you to enable or disable LDAP referrals.
- Referral Hop Limit – Specify the referral hop limit from 1 to 5.

Search Name Order:

- Search Name Order – Specify the attribute for searching by name. [Search Entries by Name] will return matches for the first name and last name of the individual being searched. [Search Entries by Last Name] will return matches for the last name of the individual being searched. [Search Entries by First Name] will return matches for the first name of the individual being searched.

LDAP User Mappings

Server Information:

- IP Address/Host Name & Port – Displays the primary LDAP server IP address and port number.
- Server Application – Displays the directory application to use. This is a display-only item.
- Backup IP Address/Host Name & Port – Displays the secondary LDAP server IP address and port number.
- Search Root Entry DN – Displays the distinguished name that represents the search start point.

Search:

- Properties – Displays “Imported Heading”. This is a display-only item.
- Common Name – Specify the name attribute type using up to 32 characters.
- E-mail Address – Specify the e-mail address attribute type using up to 32 characters.
- Business Phone – Specify the business phone attribute type
- Office – Specify the office attribute type
- Business Address – Specify the business address attribute type
- Home – Specify the home attribute type
- Custom Item 1 - 3 – Specify the attribute types of custom parameters 1 to 3.

LDAP Authentication

LDAP Authentication:

- Authentication Method – Specify the LDAP authentication method.
- Attribute of Typed User Name – Specify the typed user name attribute.
- Attribute of Login User Name – Specify the login user name attribute.
- Use Added Text String – Specify whether to use additional user name characters.
- Text String Added to User Name – Enter the text string to be added to the user name.

LDAP Group Access

System Administrator Authorization:

- System Administrator Access Group – Enables you to configure, test, and save the settings for the System Administrator Access Group. This group is used to control access to the Tools settings on the machine.

Account Administrator Authorization:

- Account Administrator Access Group – Enables you to configure, test, and save the settings for the Account Administrator Access Group. This group is used to control access to the Accounting settings on the machine.

Custom Filters

- E-mail Address Filter – Specify the text string to be used when searching e-mail addresses upon network authentication.

7. Select [Apply] to reflect the new settings.

8. Enter the user ID and passcode, and then select [OK].

NOTE: The default user ID is "11111" and the default passcode is "x-admin".

9. When the reboot message appears, select [Reboot Machine].

POP3 Setup

This page allows you to configure the POP3 settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
3. Select the plus symbol [+] to the left of the [Protocols] folder.
4. Select [POP3 Setup].
5. Set up the following displayed in the frame.

Server Information:

- IP Address/Host Name & Port – In the first text box, enter the host name or IP address of the POP3 server in domain, IPv4, or IPv6 format using up to 128 characters. Enter the port number in the second text box.
- POP Receive Password Encryption – Select to enable APOP authentication.
- Login Name – Enter the POP user name.
- Password – Enter the POP user password.
- Retype Password – Re-type the password for verification.

POP3 Settings:

- Polling Interval – Enter the interval to check the POP3 server between 1 and 120 minutes in 1 minute increments.

6. Select [Apply] to reflect the new settings.

7. Enter the user ID and passcode, and then select [OK].

NOTE: The default user ID is "11111" and the default passcode is "x-admin".

8. When the reboot message appears, select [Reboot Machine].

HTTP

This page allows you to configure the HTTP settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.

2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.

3. Select the plus symbol [+] to the left of the [Protocols] folder.

4. Select [HTTP].

5. Set up the following displayed in the frame.

- Connection – Displays whether the protocol is enabled or disabled.
- Physical Connection – Displays "Ethernet". This is a display-only item.
- Keep Alive Timeout – Displays "60 seconds". This is a display-only item.
- Maximum Connections – Enter the maximum number of connections between 1 and 15.
- Port Number – Enter the port to be used for HTTP communication.
- Secure HTTP (SSL) – Select whether or not to enable SSL/TLS communication.
- Secure HTTP Port Number – Enter the port number to be used for SSL/TLS communication.
- Connection Time-Out – Allows you to specify the connection time-out period when transmission fails

6. Select [Apply] to reflect the new settings.

7. Enter the user ID and passcode and then select [OK].

NOTE: The default user ID is "11111" and the default passcode is "x-admin".

8. When the reboot message appears, select [Reboot Machine].

Proxy Server

This page allows you to configure the proxy server settings for the communication protocols.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
3. Select the plus symbol [+] to the left of the [Protocols] folder.
4. Select [Proxy Server].
5. Set up the following displayed in the frame.

General:

- Use Proxy Server – Select whether to use a proxy server.
- Proxy Setup – Select whether to use the same proxy for all protocols or to use a different proxy for each protocol.
- Address to Bypass Proxy Server – Enter an address that bypasses the proxy server.

HTTP Server:

- Server Name – Enter the HTTP server name.
- Port Number – Enter the HTTP proxy server port number.
- Authentication – Select whether to enable HTTP proxy server authentication.
- Login Name – Enter the HTTP proxy server login name.
- Password – Enter the HTTP proxy server password. Enter a password and then re-enter the password for confirmation.
- Retype Password – Re-enter the password for verification.

HTTPS Server:

- Server Name – Enter the HTTPS proxy server name.
- Port Number – Enter the HTTPS proxy server port number.
- Authentication – Select whether to enable HTTPS proxy server authentication.
- Login Name – Enter the HTTPS proxy server login name.
- Password – Enter the HTTPS proxy server password. Enter a password and then re-enter the password for confirmation.
- Retype Password – Re-enter the password for verification.

6. Select [Apply] to reflect the new settings.
7. Enter the user ID and passcode and then select [OK].

NOTE: The default user ID is "11111" and the default passcode is "x-admin".

8. When the reboot message appears, select [Reboot Machine].

IPP

This page allows you to configure the IPP settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
 2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
 3. Select the plus symbol [+] to the left of the [Protocols] folder.
 4. Select [IPP].
 5. Set up the following displayed in the frame.
 - Port Number – The default IPP port number 631 will be displayed. This is a display-only item.
 - Add Port Number – Enter the port number.
 - TBCP Filter – Select the check box to enable TBCP Filter when processing PostScript data. This is only available when the optional PostScript kit is installed. When the transmission data includes binary data or EPS data, disable this feature.
 - Administrator Mode – Allows you to enable or disable the Key Operator Mode.
 - DNS – Allows you to configure whether to enable/disable DNS.
 - Connection Time-Out – Allows you to specify the connection time-out period when transmission fails.
 6. Select [Apply] to reflect the new settings.
 7. Enter the user ID and passcode and then select [OK].
- NOTE:** The default user ID is "11111" and the default passcode is "x-admin".
8. When the reboot message appears, select [Reboot Machine].

UPnP Discovery

This page allows you to configure the UPnP settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
3. Select the plus symbol [+] to the left of the [Protocols] folder.
4. Select [UPnP Discovery].
5. Set up the following option displayed in the frame.
 - Port Number – Specify the UPnP port number.
6. Select [apply] To reflect the new setting.
7. Enter the user ID and passcode, and then select [OK].

NOTE: The default user ID is "11111" and the default passcode is "x-admin".

8. When the reboot message appears, select [Reboot Machine].

WebDAV

This page allows you to configure the WebDAV settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
3. Select the plus symbol [+] to the left of the [Protocols] folder.
4. Select [WebDAV].
5. Set up the following option displayed in the frame.
 - Port Number – Specify the port number.
 - Connection Time-Out – Allows you to specify the connection time-out period when transmission fails.
6. Select [Apply] to reflect the new setting.
7. Enter the user ID and passcode, and then select [OK].

NOTE: The default user ID is "11111" and the default passcode is "x-admin".

8. When the reboot message appears, select [Reboot Machine].

Bonjour

This page allows you to configure the Bonjour settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
3. Select the plus symbol [+] to the left of the [Protocols] folder.
4. Select [Bonjour].
5. Set up the following displayed in the frame.
 - Host Name – Enter the host name.
 - Printer Name – Enter the printer name.
6. Select [Apply] to reflect the new settings.
7. Enter the user ID and passcode, and then select [OK].

NOTE: The default user ID is "11111" and the default passcode is "x-admin".

8. When the reboot message appears, select [Reboot Machine].

WSD

This page allows you to configure the WSD settings.

NOTE: Some settings on this page will only be available after you restart CentreWare Internet Services, or after the machine is switched off and on.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
3. Select the plus symbol [+] to the left of the [Protocols] folder.
4. Select [WSD].
5. Set up the following displayed in the frame.
 - Port Number - Enter the port number between 1 and 65535. Do not use the numbers assigned to the other ports.
 - TBCP Filter - Check to enable TBCP Filter when PostScript data is to be processed. This is only available when the optional PostScript Kit is installed. When the transmission data includes binary data or EPS data, disable this. For Windows, follow the Output Protocol setting in the Device Settings tab of the Properties screen of the print driver.

- Data Receive Time-Out - Enter the timeout period for receiving data from WSD clients between 1 and 65535 seconds in 1 second increments.
- Notification Delivery Time-Out - Enter the timeout period for notification delivery to WSD clients between 1 and 60 seconds in 1 second increments.
- Maximum TTL - Enter a value for the maximum TTL between 1 and 10. Enter the number of network for communicating with WSD clients through routers.
- Maximum Number of Subscribers - Enter the maximum number for WSD clients between 10 and 100.

6. Select [Apply] to reflect the new settings.

7. Enter the user ID and passcode, and then select [OK].

NOTE: The default user ID is "11111" and the default passcode is "x-admin".

8. When the reboot message appears, select [Reboot Machine].

Machine Software Upgrades

To upgrade, you must first obtain the upgrade software and then install it.

Prepare for the upgrade

It is important to obtain the correct upgrade file for your machine. Determine the software version you are currently running, as follows:

1. Open your web browser and enter `http://` and the TCP/IP address of the machine in the Address or Location field, then press [Enter].
2. Click the [Properties] tab.
3. Click the [General Setup] folder.
4. Click [Configuration].
5. Scroll down to the Software section to see your System Software version. Write down the version number. Note whether the Controller ROM is listed as Controller ROM or Controller + PS ROM. This will determine which file to download from Xerox.com.
6. Download the software file:
 - a) Obtain the new software upgrade file (Controller ROM or Controller + PS ROM) for your machine from the www.xerox.com web site, or from your Xerox Customer Support Representative.
 - b) Download the upgrade file to a local or network drive.
You will be able to delete the file after the upgrade procedure.
 - c) Extract the .bin file from the .zip archive.

At your workstation

1. Verify that the machine is up and running, and is not in PowerSaver mode.
2. Open your web browser and enter the TCP/IP address of the machine in the Address or Location field, then press [Enter].
3. Click the [Properties] tab.
4. Click the [Services] folder.
5. Click the [Machine Software] folder.
6. In the [Machine Software] folder:
 - a) Click [Upgrades]. Click or verify the Enabled check box, then click [Apply].
 - b) Click [Manual Upgrade]. Click [Browse] and move through your file system to the new software. Click [Install Software] to install the software.

NOTE: The Manual Upgrade link provides the ability to upgrade software manually, after enabling with the Upgrades link.

5 NetWare

This chapter explains how to install the machine onto a NetWare network. The following information is provided.

Information Checklist – page 77

NetWare Environments – page 78

NetWare Installation – page 79

Installation Procedure – page 79

Network Communication Setup – page 79

NetWare Setup – page 81

Workstation Setup – page 81

Test Print – page 81

Information Checklist

Before installing the machine onto a network, make sure that the following items are available or have been performed.

Item	By
An existing operational NetWare network is required. These procedures are not designed to install a NetWare network.	Customer
NetWare versions 3.x, 4.x, 5.x or 6.x.	Customer
Obtain and record the following information, if required: <ul style="list-style-type: none">• IP address• Gateway address• Subnet mask• Host name NOTE: Only the IPv4 format is available for the addresses. Refer to the glossary for additional information about the Gateway Address and Subnet mask, if needed.	Customer
Test the machine to make sure that it is installed fully and functioning correctly.	Customer
Install the print driver.	Customer

If problems arise during the machine installation, refer to *the Problem Solving chapter* for assistance.

CAUTION: Do not connect the network cable to the machine until instructed to do so.

NetWare Environments

System configuration

The machine supports NetWare PServer mode in Bindery or NDS. NetWare 3.x/4.x/5.x/6.x is required to support Bindery. NetWare 4.11 or later is required to support NDS. In the PServer mode, the machine will function as a print server and print jobs from the print queue. The machine uses one file server user license.

NOTE: The machine does not support RPrinter mode.

Target computers

The NetWare versions and NetWare client computers require the following environments.

NetWare versions

A Novell-accredited computer which can be installed with NetWare 3.x/4.x/5.x/6.x.

NetWare client computers

A Novell-accredited computer which can run Windows 95, Windows 98, Windows ME, Windows NT 4.0, Windows 2000, Windows XP or Windows Server 2003.

NOTE: When using the LPD port by Novell Distributed Print Services (NDPS), activate the LPD port on the machine and set the IP address.

IPX/SPX frame types

The machine supports the following Ethernet interfaces.

- 10Base-T (Twisted Pair Cable)
- 100Base-TX (Twisted Pair Cable)

The machine supports the following frame types.

- Ethernet II specification
- IEEE802.3 specification
- IEEE802.3/802.2 specification
- IEEE802.3/802.2/SNAP specification

The machine will send out packets of each frame type on the connected network. It will automatically use the frame type which corresponds to the first response. However, if more than one protocol is running simultaneously on the same network, the machine will use the same frame type as used by the NetWare server.

NOTE: Some network components, such as the hub may not support automatic frame type setup. If the data link indicator light of the port does not light up, match the IPX/SPX setting of the frame type of the machine, to the frame type of the file server.

NetWare Installation

This section describes the installation procedures to use the machine in a NetWare environment.

Installation Procedure

The installation procedure is as follows.

Network Communication Setup

Enable the SMB protocol.

Go to Properties->Connectivity->Port Settings.

1. At the CentreWare Internet Services home page for the machine, select the [Properties] tab.
2. In the [Properties] frame, select the plus symbol [+] to the left of the [Connectivity] folder.
3. Select the plus symbol [+] to the left of the [Port Settings] folder.
4. On the SMB line, select the Enabled box. Select [Apply].

When using IPX:

Set the Netware protocol to [Enabled] using the touch screen or CentreWare Internet Services.

When using TCP/IP:

Set the Netware protocol to [Enabled] using the touch screen or CentreWare Internet Services. Set the IP address on the control panel or CentreWare Internet Services.

For more information, refer to *Network Communication Setup on page 79*.

NetWare Setup

For more information, refer to *NetWare Setup on page 81*.

Workstation Setup

For more information, refer to *Workstation Setup on page 81*.

Test Print

For more information, refer to *Test Print on page 81*.

Network Communication Setup

Use this procedure to set up the network communication parameters of the machine.

At the machine, perform these steps.

NOTE: Keep the SNMP protocol enabled while you use the machine on the TCP/IP network.

NOTE: Some of the configuration options for this protocol are only available from CentreWare Internet Services.

First, enable the NetWare protocol.

1. Connect the machine to the network.
2. Press the <Log In/Out> button on the control panel, and then type the Key Operator login ID to enter the Key Operator mode.

NOTE: The passcode may also be required depending on the machine configuration.

3. Press the <Machine Status> button on the control panel, and then select the [Tools] tab on the screen.
4. Select [System Settings].
5. Select [Connectivity & Network Setup].
6. Select [Port Settings].
7. Select [NetWare], and then [Change Settings].
8. Select [Port Status], and then [Change Settings].
9. Select [Enabled], and then [Save].

Next, establish TCP/IP if you use IP Address for a NetWare network.

1. In [Connectivity & Network Setup], select [Protocol Settings].
2. Under [TCP/IP - IP Mode], select [IPv4 Mode] or [Dual Stack].

NOTE: [IPv6 Mode] is not available for Netware settings.

3. Select [IP Address Resolution], and then [Change Settings].
4. Select a method for establishing an IP address from [DHCP], [BOOTP], [RARP], [DHCP/Autonet], and [STATIC], and then select [Save].

NOTE: Use the DHCP server together with the Windows Internet Name Server (WINS) server.

If you selected [STATIC] in step 4, then proceed to step 5 to configure the protocol settings. Otherwise, proceed to step 11.

5. Select [IPv4 - IP Address], and then [Change Settings].
6. Use the keypad on the screen to enter the IP Address for the machine in the format "xxx.xxx.xxx.xxx". Enter a value (0 to 255) into the highlighted field and select [Next]. The next 3 digits are highlighted. When you have finished entering all values, select [Save].
7. Select [IPv4 – Subnet Mask], and then [Change Settings].
8. Using the same method as in step 6, enter the Subnet Mask.

9. Select [IPv4 – Gateway Address], and then [Change Settings].

NOTE: If you do not wish to set the gateway address, leave this field blank.

10. Using the same method as in step 6, enter the Gateway Address.

11. Select [IPv4 – IP Filter], and then [Change Settings].

12. Select [Enabled] to filter access to the machine.

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

13. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

NetWare Setup

Use PCONSOLE or NetWare Administrator (NWADMIN) to create a print queue, print server and printer, and assign the respective objects. For information on how to use PCONSOLE or NWADMIN, refer to manual which comes with NetWare.

There are two ways to type the name: typeable (OU, O, etc.) and typeless. The user must use the typeable name in order for it to work.

Example: ou=xxxx.o=yyyy.c=zzzzz

When using in the PSERVER mode, set as follows.

- Printer server name – Use the same device name as the target printer.
- Printer location – Set as Auto Load.
- Printer Type – Set as Parallel.
- Parallel Setting – Set as Auto Load.

For NetWare 5, only NWADMIN is available for use.

Workstation Setup

Install the PCL print driver on the NetWare client computer. Refer to the HTML document on PCL Print Driver CD-ROM.

Test Print

To make sure that the machine has been installed on the network correctly, submit a test print from each client workstation. Perform the following steps.

1. Open a document on a client workstation.
2. Select the machine as the printer.
3. Print the document on the machine and verify that it prints correctly.

4. Make sure that the print driver is installed on every workstation that will be sending jobs to the machine.
5. Repeat the test for all workstations that will be sending jobs to the machine.

The installation process is now complete.

If the test print fails, refer to *the Problem Solving chapter* for assistance.

6 UNIX TCP/IP

This chapter explains how to set up the machine to operate in a UNIX TCP/IP environment. The UNIX Workstation Operating Systems (OS) supported are Solaris, SunOS, and HP-UX. The following information is provided.

Information Checklist – page 83
UNIX TCP/IP Environments – page 84
UNIX TCP/IP Installation – page 84
Installation Procedure – page 84
Network Communication Setup – page 85
Workstation Setup – page 86
Test Print – page 92
Printing – page 92
Solaris/HP-UX – page 92
SunOS – page 94
Printer Status – page 96
Solaris/HP-UX – page 96
SunOS – page 97
-C Option – page 98

Information Checklist

Before installing the UNIX TCP/IP features on the machine, make sure that the following items are available or have been performed.

Item	By
An existing operational network utilizing a UNIX TCP/IP protocol is required. These steps are not designed to install the UNIX TCP/IP network.	Customer
SunOS 4.1x, Solaris 1.x, 2.x, 7.x, 8.x, 9.x, 10.x, HP-UX 9.x, 10.x, 11.x	Customer
Make sure that the correct IP Address is being used for the machine.	Customer
Make sure that the Gateway Address is set correctly.	Customer
Make sure that the Subnet Mask (for IPv4) or Prefix (for IPv6) is set correctly.	Customer
Make sure that the Host Name is set correctly.	Customer
Test the copy and fax features of the machine, to make sure that they are installed fully and functioning correctly.	Customer

If you encounter problems during the installation of the machine, refer to *the Problem Solving chapter* for assistance.

CAUTION: Do not connect the network cable to the machine until instructed to do so.

UNIX TCP/IP Environments

System configuration

The machine uses the Line Printer Daemon Protocol (LPD) that supports TCP/IP as the transport protocol. With the LPD, use the machine as a UNIX network printer.

The LPD supports spool mode, this is where print jobs from clients are spooled once before output. It also supports non-spool mode, this is where print jobs are output sequentially, without spooling.

Target computers

The target computers are as follows.

- Workstation or personal computer with RFC 1179 Line Printer Daemon Protocol

Interface

The LPD is available on the following interfaces:

- Ethernet 100Base-TX
- Ethernet 10Base-T

The applicable frame types conform to Ethernet II (Ethernet interface).

UNIX TCP/IP Installation

This section explains how to install the machine in a UNIX TCP/IP environment.

Installation Procedure

There are three stages.

Network Communication Setup

The machine needs to be set up and configured for TCP/IP.

Workstation Setup

The workstation OS needs to be configured for the machine.

Test Print

A print job should be submitted to make sure that the machine has been installed and configured correctly.

Network Communication Setup

Use this procedure to set up the network communication parameters of the machine.

NOTE: Keep the SNMP port enabled while you use the machine on the TCP/IP network.

NOTE: Some of the configuration options for this protocol are only available from the CentreWare Internet Services.

Follow the steps below to establish TCP/IP.

1. Connect the machine to the network.
2. Press the <Log In/Out> button on the control panel, and then type the Key Operator login ID to enter the Key Operator mode.

NOTE: The passcode may also be required depending on the machine configuration.

3. Press the <Machine Status> button on the control panel, and then select the [Tools] tab on the screen.
4. Select [System Settings].
5. Select [Connectivity & Network Setup].
6. Select [Protocol Settings].
7. Under [TCP/IP - IP Mode], select [IPv4 Mode], [IPv6 Mode], or [Dual Stack].

When [IPv4 Mode] or [Dual Stack] is selected

8. Select [IP Address Resolution], and then [Change Settings].
9. Select a method for establishing an IP address from [DHCP], [BOOTP], [RARP], [DHCP/Autonet], and [STATIC], and then select [Save].

NOTE: Use the DHCP server together with the Windows Internet Name Server (WINS) server.

If you selected [STATIC] in step 9, then proceed to step 10 to configure the protocol settings. Otherwise, proceed to step 16.

10. Select [IPv4 - IP Address], and then [Change Settings].
 11. Use the keypad on the screen to enter the IP Address for the machine in the format "xxx.xxx.xxx.xxx". When you have finished entering all values, select [Save].
 12. Select [IPv4 – Subnet Mask], and then [Change Settings].
 13. Using the same method as in step 11, enter the Subnet Mask.
 14. Select [IPv4 – Gateway Address], and then [Change Settings].
- NOTE:** If you do not wish to set the gateway address, leave this field blank.
15. Using the same method as in step 11, enter the Gateway Address.
 16. Select [IPv4 – IP Filter], and then [Change Settings].

17. Select [Enabled] to filter access to the machine.

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

18. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

When [IPv6 Mode] or [Dual Stack] is selected

8. Set [IPv6 Address Manual Configuration].

NOTE: Select [Enabled] when the machine is connected to a network on which IPv6 stateless address autoconfiguration is disabled, or when you want to set a static IPv6 address.

If you selected [Enabled] in step 8, proceed to step 9. Otherwise, proceed to step 15.

9. Select [IPv6 – Manual IP Address Setup], and then [Change Settings].

10. Use the keypad on the screen to enter the IP Address for the machine in the format “xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx”. Select [Save].

11. Select [Manually Configured IPv6 Prefix], and then [Change Settings].

12. Set the IP address prefix, and then select [Save].

13. Select [IPv6 – Manual Gateway Setup], and then [Change Settings].

14. Using the same method as in step 10, set the gateway address.

15. Select [IPv6 – IP Filter], and then select [Enabled] or [Disabled].

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

16. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

Workstation Setup

This section explains how to set up Solaris, SunOS, and HP-UX workstations. Refer to the relevant instructions below.

Solaris – page 88

SunOS – page 89

HP-UX – page 90

Print language/mode/logical printer

A printer name for the logical printer should correspond to the print language/mode to be used for printing, or to the Logical Printer Number which was registered through CentreWare Internet Services.

Printer Name	Print Language/Mode/Logical Printer
PS*	PostScript
PSASC/PSA*	PostScript
PSBIN/PSB*	PostScript
PCL	PCL
LP	Print language specified on the touch screen of the machine.
DUMP/DMP	Dump mode
AUTO/ATO	Auto detection mode
TIFF/TIF	TIFF direct print
TIFF%n	TIFF (%n: Logical Printer Number 1 to 20 which were registered through CentreWare Internet Services.)
PS%n*	PostScript (%n: Logical Printer Number 1 to 10 which were registered through CentreWare Internet Services.)

*: Requires PostScript Option Kit

You can also add output parameters to the above printer name. The parameters are the same as those for -C option. Insert “_” between the printer name and output parameter, for example “PS_A4”.

NOTE: If specifying a different printer name, the print language or mode specified on the touch screen of the machine is used.

NOTE: When setting print languages/modes from the same workstation to a single printer, it is recommended to set one kind of each. If two or more kinds of languages/modes are set, the workstation may display the same job number for some queues (lpq).

NOTE: To print an ASCII-format PostScript file, specify PSASC for data processing with TBCP enabled.

NOTE: To print a binary-format PostScript file, specify PSBIN for data processing with TBCP disabled.

NOTE: When specifying PS, the machine functions as if PSBIN is specified.

NOTE: You cannot use -C option when specifying the printer name with the output parameter.

NOTE: For details about -C option, refer to *-C Option on page 98*.

NOTE: Lowercase characters can also be used for a printer name.

NOTE: Up to 64 characters can be used for a printer name.

NOTE: Output parameters in the print data take priority over the printer name.

Solaris

Follow the steps below to set up a Solaris workstation to communicate with the machine.

1. Log in as root at a client workstation.
2. Use the Solaris ADMINTOOL to add the machine to the system host files.

NOTE: Refer to the Solaris documentation for instructions on using the ADMINTOOL.

- 1) Select [Browse].
 - 2) Select [Printers].
 - 3) Select [Edit].
 - 4) Select [Add].
 - 5) Select [Local Printer].
 - 6) Enter the [Host Name] in the Printer Name field and then select [OK].
 - 7) Select [File].
 - 8) Select [Exit].
3. Verify connectivity to the machine, by using a UNIX command such as ping, as shown in the following example:

```
ping PrinterName
PrinterName is alive
```

NOTE: The remote queue name must be set to lp to spool jobs to the machine.

SunOS

Follow the steps below to set up a SunOS workstation to communicate with the machine.

1. Log in at a client workstation as root and add the machine to the `/etc/hosts` file.
For example:

```
IP address [tab] PrinterName
```

NOTE: If an NIS server is running on the same segment of the network as the machine, log in at the NIS server as root and add the machine to the master hosts file.
For example:

```
IP address [tab] PrinterName
```

2. Verify connectivity to the machine, by using a UNIX command such as `ping`, as shown in the following example:

```
ping PrinterName
PrinterName is alive
```

3. Edit the `/etc/printcap` file to contain an entry for the machine queue using the following example:

```
PrinterName:\
:lp=:\
:rm=PrinterName:\
:mx#0:\
:sd=/var/spool/lpd/PrinterName:\
:lf=/var/spool/lpd/PrinterName/log:
```

- 1) `PrinterName` is the local client name of the machine.
- 2) `lp=` is the local device name for the printer output. For remote printers, this parameter must be set to nothing.

NOTE: The recommended remote queue name is `lp`. That queue name will work with the machine.

- 3) `rm=` is the remote device. This is the IP hostname for the machine in the local client. The remote printer name defaults to `lp`, the default printer.
- 4) `mx#0` is the indicator that there is no limit on the document size.
- 5) `sd=` is the path of the queue for the machine.
- 6) `lf=` is the error log file name.

4. The machine can be designated as the location of the default print queue. It will then be unnecessary to include the PrinterName in the lpr command line.

1) To designate the machine for the default print queue, add the following to the /etc/printcap file. This is in addition to the information entered in the previous step:

```
lp PrinterName:\
:lp=:\
:rm=PrinterName:\
:mx#0:\
:sd=/var/spool/lpd/PrinterName:
```

5. Create the spool directory identified in the printcap file and set the access attributes, as shown in the example below. The spool directory should be located on a disk partition large enough to hold copies of documents that will be submitted.

```
cd /var / spool / lpd
mkdir PrinterName
chmod 744 PrinterName
```

HP-UX

Follow the steps below to set up an HP-UX workstation to communicate with the machine.

1. Log in as root at a client and add the machine to the /etc/hosts file. For example:

```
Ip address [tab] PrinterName
```

2. Verify connectivity to the machine, by using a UNIX command such as ping from a terminal command window, as shown in the following example:

```
ping PrinterName
```

NOTE: Select CTRL+C to cancel the ping command.

3. There are two methods to install the machine on an HP-UX workstation. Choose the method that will be used to complete the installation and refer to the appropriate page:

Using the Command Window TTY Method – page 90

Using the System Administrator Manager (SAM) GUI Method – page 91

Using the Command Window TTY Method

Follow the steps below to use the command window to manually enter command strings.

1. Open a command window on the desktop. From the command prompt (#), enter the information below. Remember that UNIX commands are case-sensitive.

- 1) Type `su` to access the superuser mode.
- 2) Type `sh` to run the Bourne shell.
- 3) Type `lpshut` to stop the print service.
- 4) Type the following command on one line:

```
lpadmin -pqueueName -v/dev/null -mrmodel -ocmrcmodel-  
osmrsmodel -ob3 -orc -ormhostname -orlp
```

NOTE: The queueName is the name of the print queue being created. The hostname is the PrinterName for the machine from the `etc/hosts` file. The remote queue name must be set to `lp` to spool jobs to the machine. This is set by the `-orlp` command.

2. Type `lp sched` to start the print service.
3. Type `enable queueName` to enable the queue to print to the machine.
4. Type `accept queueName` to enable the queue to start accepting jobs from the HP-UX workstation.

NOTE: The queueName is the name of the print queue that has been created.

5. Type `exit` to exit the Bourne shell.
6. Type `exit` to exit superuser mode.
7. Type `exit` to close the command window.
8. Continue with *Test Print on page 92*.

Using the System Administrator Manager (SAM) GUI Method

Follow the steps below to use the HP System Administrator Manager (SAM) GUI (Graphical User Interface).

NOTE: Refer to the HP-UX documentation for additional information on using the System Administrator Manager (SAM).

1. Start the SAM application.
2. Select the [Printers and Plotters] icon.
3. Select [Actions] from the Menu Bar.
4. Select [Add Remote Printer/Plotter] from the pull-down menu.
5. Enter the following information into the form displayed in the [Add Remote Printer/Plotter] dialog box:
 - 1) Printer Name
 - 2) Remote System Name
 - 3) For the Remote Printer Name, enter "lp".

NOTE: The Printer Name is the name of the print queue being created. The Remote System Name is the PrinterName for the machine from the `etc/hosts` file. The Remote Printer Name must be set to `lp` to spool jobs to the machine.

- 4) Enable Remote Printer on a BSD system by selecting the check box.
 - 5) Make sure that the [Remote Cancel Model] is set correctly,
 - 6) Make sure that the [Remote Status Model] is set correctly.
 - 7) Make sure that the [Default Request Priority] is set correctly.
 - 8) Make sure that the [Allow Anyone to Cancel a Request] check box is set correctly.
 - 9) Make sure that the [Make This Printer the Default Destination] check box is set correctly.
6. Select [OK].
 7. Read and respond to any displayed system messages.
 8. Continue with *Test Print* on page 92.

Test Print

To make sure that the machine has been installed on the UNIX TCP/IP network correctly, a test print should be submitted from each client workstation. Perform the following steps.

1. Start the Open Windows application.
2. Send a test print to the machine.
3. Repeat the procedure for all workstations that will be sending jobs to the machine.

The UNIX TCP/IP installation is now complete.

If the test print fails, refer to *the Problem Solving chapter* for assistance.

Printing

Solaris/HP-UX

This section describes printing from workstations running Solaris or HP-UX. Refer to the manuals supplied with the workstation for full details.

Print (lp)

The lp command is used for printing.

Command format

```
lp [-d printer name] [-n number of copies] File name
```

Command options

The following command options are available.

- `-d printer name`

Specify the printer name registered by the `lpadmin` command as the `-d` option. If this option is omitted, the default printer `lp` will be used.

- `-n number of copies`

This option specifies the number of copies. If one `lp` command is issued to print multiple files, the number of copies specified will apply to all the files. However, this is only effective when the machine is in the spool mode. In the non-spool mode, the client must be a Windows NT machine to use this option.

NOTE: Some options which are not listed here (e.g. `-m` option) and which are not processed by the workstation sending the print instructions, will not be valid.

NOTE: In the spool mode, up to 32 files can be printed by one `lp` command. Any files specified after the 32nd file will be ignored.

Example

To print a file named `file1` to a printer named `fxPS`, enter the following command:

```
%lp -dfxPS file1
```

To output three copies of `file1` and then three copies of `file 2` to `fxPS`, enter the following command:

```
%lp -dfxPS -n3 file1 file2
```

Delete (cancel)

The cancel command is used to delete print data.

Command format

```
cancel [printer name] [job number]
```

Command options

The following command options are available.

- `Printer name`

This option specifies the printer name. The cancel command can be effectively used with the combined use of `-a`, `-e` and `-u` as shown below. This option is only valid in the spool mode.

- `-a` Deletes all the print data belonging to the user issuing the command, from the specified printer.
- `-e` Deletes all the print data from the specified printer.
- `-u user name` Deletes all the print data belonging to the specified user, from the specified printer.

- `job number`

This option specifies the job number of the print data to be deleted. These numbers can be checked by issuing an `lpstat` command.

This option is only valid in the spool mode.

NOTE: Print data which consists of multiple files sent in one print instruction cannot be deleted file by file. All the files will be deleted together.

NOTE: This command is invalid if no options are specified, or if there is no print data which matches the option.

NOTE: You can only delete print data from the same workstation used to send the print data. You cannot delete print data sent by other workstations.

NOTE: When a command to delete print data is received, the file will be deleted even if it is in the process of being printed. Any unprinted data will be cancelled after the file has been deleted.

Example

To delete the print data from printer fxPS for job number 27, enter the following command.

```
%cancel fxPS-27
```

To delete all the print data from printer fxPS, enter the following command.

```
%cancel fxPS -e
```

SunOS

This section describes printing from a workstation running SunOS. See the manuals supplied with the workstation for full details.

Print (lpr)

The lpr command is used to print.

Command format

```
/usr/ucb/lpr [-P printer name] [-# number of copies]  
[-C parameter] File name
```

Command options

The following command options are available.

- -P printer name

This option specifies the printer name registered at /etc/printcap. If this option is omitted, print data will be output to the default printer lp.

- -# number of copies

This option specifies the number of copies. If one lpr command is issued to print multiple files, the number of copies specified by this option will apply to all the files.

This option is only valid in the spool mode.

- -C parameter

To print from the machine using the PostScript language, use the -C option to specify the form of output.

This option is valid in the spool mode. In the non-spool mode, the client must be a Windows NT machine to use this option.

NOTE: If the PostScript logical printer and the -C option are configured simultaneously using CentreWare Internet Services, some functions may not work as expected. Also, when specifying the PostScript logical printer as a default printer on UNIX, it is recommended not to use the -C option by lpr. Refer to the -C option of the lpr command.

NOTE: Some options which are not listed here (e.g. -m option) and which are not processed by the workstation sending the print instructions, will not be valid.

NOTE: In the spool mode, up to 32 files can be specified in one lpr command. Any files specified after the 32nd file will be ignored.

Example

To print a file named file1 to a printer named fxPS, enter the following command:

```
%lpr -PfxPS file1
```

To print three copies of file1 and three copies of file 2 to fxPS, enter the following:

```
%lpr -PfxPS -#3 file1 file2
```

To print a file named file1 to a printer named fxPS as an A4-sized (210 × 297 mm/ 8.3 × 11.7 inches) duplex job, enter the following command:

```
%lpr -PfxPS -C,DUP,A4 file1
```

Delete (lprm)

The lprm command is used to delete print data.

Command format

```
/usr/ucb/lprm [-P printer name] job number
```

Command options

The following command options are available.

- -P printer name

This option specifies the printer name registered with /etc/printcap. If this option is omitted, the default printer lp will be used.

- job number

This option specifies the job number of the print data to be deleted. A job number is a serial number between 1 and 999 determined by the workstation. These numbers can be checked by issuing an lpq command.

Instead of a job number, you can specify a user name or "-".

This option is invalid in the non-spool mode.

- User name is only valid when you log-in as a superuser. When this option is taken, all the print data you specify will be deleted.

This option is invalid in the non-spool mode.

- -
You can delete all your print data by specifying this option. If this option is issued by a superuser, all the print data received by the machine can be deleted.

This option is invalid in the non-spool mode.

NOTE: Print data which consist of multiple files sent in one print instruction cannot be deleted file by file. All the files will be deleted together.

NOTE: This command is invalid if no options are specified, or if there is no print data which matches the option.

NOTE: You can only delete print data from the same workstation used to send the print data. You cannot delete print data sent by other workstations.

NOTE: When a command to delete print data is received, the file will be deleted even if it is in the process of being printed. Any unprinted data will be cancelled after the file has been deleted.

Example

To delete the print data from printer fxPS for job number 351, enter the following command:

```
%lprm -PfxPS 351
```

Printer Status

Solaris/HP-UX

The lpstat command is used to inquire about the status of the machine.

NOTE: In the non-spool mode, this function is available to Windows NT clients but not to HP-UX/Solaris clients.

Command format

```
lpstat [option]
```

Command options

The following command options are available.

If no option is specified, all the print data-related information will be displayed.

The sequence of the options does not affect the outcome.

To use more than one argument at the same time, separate them by commas and enclose all the arguments with “ ”.

E.g. %lpstat -u "user1,user2,user3"

- -o [printer name]

This option displays the print data for the specified printer.

- -t

This option displays all the information.

- -u [user name]

This option displays information about print data received from specified users.

- -v [printer name]

This option displays the printer name and the path name for the machine. The printer name is specified in the argument.

NOTE: Long file names will be truncated.

NOTE: Information for a maximum of 64 print instructions can be displayed.

NOTE: If two or more types of print languages/modes are set up on a single workstation, identical job numbers may be displayed when an inquiry command (lpstat) is issued.

Example

To inquire about the print data received by a printer named fxPS, enter the following command:

```
%lpstat -ofxPS
```

SunOS

The lpq command is used to inquire about the status of the machine.

NOTE: In the non-spool mode, this function is available to Windows NT clients but not to SunOS clients.

Command format

```
/usr/ucb/lpq [-P printer name] [-l] [user name]  
[+interval]
```

Command options

The following command options are available.

- -P printer name

This option specifies the printer name registered at /etc/printcap. If this option is omitted, the default printer lp will be used.

- -l

This option displays information about the workstation which is sending the print instruction in long format.

- User name

This option displays information about print data received from a specified user.

- `+interval`

This option is used to specify the inquiry interval period for the duration of printing, until all the data received has been printed. The interval is set up in seconds.

The screen of the client is refreshed each time the information is returned.

NOTE: Long file names will be truncated.

NOTE: Information for a maximum of 64 print instructions can be displayed.

NOTE: If two or more types of print languages/modes are set up on a single workstation, identical job numbers may be displayed when an inquiry command (`lpq`) is issued.

Examples

- To inquire about the print data received by a printer named `fxPS`, enter the following command:

```
%lpq -PfxPS
```

- To display a printer named `fxPS` in long format, enter the following command:

```
%lpq -PfxPS -l
```

-C Option

On SunOS, the `-C` option can be used to specify the print format if the machine prints with the PostScript language in spool mode.

This section explains the functions which can be specified and printing operations which will be affected using the `-C` option.

NOTE: When the PostScript logical printer that was configured using CentreWare Internet Services and the `-C` option have been specified simultaneously, some of the actions cannot be guaranteed to work. Also, when specifying the PostScript logical printer as a default printer on UNIX, it is recommended not to use the `-C` option.

Function

The following items can be set up using the `-C` option.

Selecting a paper tray

When selecting a paper tray, specify either a paper size or a tray. If the paper size is specified, the machine automatically searches and selects the tray.

The following parameters can be specified.

Parameter	Description
INTRAY1/intray1	Selects Tray 1.
INTRAY2/intray2	Selects Tray 2.

Parameter	Description
INTRAY3/intray3	Selects Tray 3.
INTRAY4/intray4	Selects Tray 4.
INTRAY5/intray5	Selects Tray 5 (manual feed).
INMF/inmf	Selects Tray 5 (manual feed).
A3/a3	Selects the tray which has A3 (297 × 420 mm/11.7 × 16.5 inches) paper loaded.
B4/b4	Selects the tray which has B4 (257 × 364 mm/10.1 × 14.3 inches) paper loaded.
A4/a4	Selects the tray which has A4 (210 × 297 mm/8.3 × 11.7 inches) paper loaded.
B5/b5	Selects the tray which has B5 (182 × 257 mm/7.2 × 10.1 inches) paper loaded.
A5/a5	Selects the tray which has A5 (148 × 210 mm/5.8 × 8.3 inches) paper loaded.
LETTER/letter	Selects the tray which has letter size (216 × 279 mm/8.5 × 11.0 inches) paper loaded.
LEGAL/legal	Selects the tray which has legal size (216 × 356 mm/8.5 × 14.0 inches) paper loaded.
INHC/inhc	Selects High Capacity Tray.

NOTE: If several parameters are specified in the first lpr command, data may not be printed correctly.

NOTE: The system default is used if no tray number is specified, or a specified tray or specified size of paper is not loaded.

NOTE: This option is for specifying paper size only. Paper is selected but the document size is not resized to fit the actual paper size.

NOTE: If the print data specifies a paper tray, those specifications take priority over any -C option.

NOTE: If an invalid combination is specified, the machine may not operate correctly.

NOTE: For some print languages, the specification may be invalid.

Selecting a paper output tray

The following parameters can be specified.

Parameter	Description
STACKER%n/stacker%n	Delivers prints to a finisher tray. (%n: bin number 1)


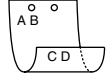
Selecting a paper type

The following parameters can be specified.

Parameter	Description
PTS/pts	Selects plain paper.
PT1/pt1	Selects thick paper 1.
POH/poh	Selects transparency.
PTP/ptp	Selects tracing paper.
PRC/prc	Selects recycled paper.

Specifying double-sided printing

The following parameters can be specified.

Parameter	Description
DUP/dup	Double-sided printing as follows: 
TUMBLE/tumble	Double-sided printing as follows: 
SIMP/simp	Single-sided printing

NOTE: If several parameters are specified in an lpr command, data may not print correctly.

NOTE: The system default is used if no parameter is specified.

NOTE: If the print data specifies double-sided or single-sided printing, those specifications take priority over any -C option.

Specifying paper size and double-sided printing

Select a paper size and a binding option. The following parameters can be specified:

Parameter	Description
A3D/a3d	Double-sided printing on A3 (297 × 420 mm/11.7 × 16.5 inches) paper and long-edge binding
A3T/a3t	Double-sided printing on A3 (297 × 420 mm/11.7 × 16.5 inches) paper and short-edge binding
A4D/a4d	Double-sided printing on A4 (210 × 297 mm/8.3 × 11.7 inches) paper and long-edge binding

Parameter	Description
A4T/a4t	Double-sided printing on A4 (210 × 297 mm/8.3 × 11.7 inches) paper and short-edge binding
B4D/b4d	Double-sided printing on B4 (257 × 364 mm/10.1 × 14.3 inches) paper and long-edge binding
B4T/b4t	Double-sided printing on B4 (257 × 364 mm/10.1 × 14.3 inches) paper and short-edge binding
A5D/a5d	Double-sided printing on A5 (148 × 210 mm/5.8 × 8.3 inches) paper and long-edge binding
A5T/a5t	Double-sided printing on A5 (148 × 210 mm/5.8 × 8.3 inches) paper and short-edge binding
B5D/b5d	Double-sided printing on B5 (182 × 257 mm/7.2 × 10.1 inches) paper and long-edge binding
B5T/b5t	Double-sided printing on B5 (182 × 257 mm/7.2 × 10.1 inches) paper and short-edge binding

NOTE: If several parameters are specified in an lpr command, data may not print correctly.

NOTE: The system default is used if no parameter is specified.

NOTE: If the print data specifies double-sided or single-sided printing, those specifications take priority over any -C option.

Specifying collation

The following parameter can be specified.

Parameter	Description
COLLATE/collate	Sorts prints electronically.

NOTE: For some print languages, the collation parameter may be invalid.

Specifying color and print modes

The following color and print mode parameters can be specified.

Parameter	Description
GC/gc	Selects monochrome for color mode and quality priority for print mode.
GB/gb	Selects monochrome for color mode and speed priority for print mode.

NOTE: If several parameters are specified in the first lpr command, data may not print.

NOTE: For some print languages, the color parameter may be invalid.

NOTE: The system default is used if no parameter is specified.

Specifying stapling

The following parameters can be specified for stapling.

Parameter	Description
STAPLETL	Places one staple in the upper left corner of the prints.
STAPLETD	Places two staples at the top of the prints.
STAPLETR	Places one staple in the upper right corner of the prints.
STAPLELD	Places two staples on the left side of the prints.
STAPLERD	Places two staples on the right side of the prints.
STAPLEBL	Places one staple in the lower left corner of the prints.
STAPLEBD	Places two staples at the bottom of the prints.
STAPLEBR	Places one staple in the lower right corner of the prints.

NOTE: If several parameters are specified in the first `lpr` command, data may not print.

NOTE: For some print languages, the stapling parameter may be invalid.

Printing

To specify the output format of printing, enter the following command:

```
-C, [parameter] , [parameter]
```

Enter a “,” (comma) after `-C` followed by the parameters which specify the output format. To specify multiple parameters, separate them with “,”.

For example, to print a file named “file1”, two-sided on A4 (210 × 297 mm/8.3 × 11.7 inches) on printer `fxPS`, enter the following command:

```
%lpr -PfxPS -C,DUP,A4 file1
```

NOTE: If the parameter string of the `-C` option exceeds 64 characters, the operation may not function correctly.

7 EtherTalk

This chapter explains how to set up the machine to operate on an EtherTalk network. The following information is provided.

Information Checklist – page 103

EtherTalk Environments – page 104

EtherTalk Installation – page 104

Installation Procedure – page 104

Network Communication Setup – page 104

Workstation Setup – page 105

Test Print – page 105

Information Checklist

Before installing EtherTalk on the machine, make sure that the following items are available or have been performed.

Item	By
An existing operational EtherTalk network with Macintosh workstations equipped with Ethernet network interface cards is required. These procedures are not designed to install an EtherTalk network.	Customer
Macintosh System versions 7.5 or later, 8.x, 9.x, or Mac OS X 10.x	Customer
Test the machine to make sure that it is installed fully and functioning correctly.	Customer
Install the Adobe PS print driver, or PPD (optional).	Customer

If problems are encountered during the machine installation, refer to *the Problem Solving chapter* for assistance.

CAUTION: Do not connect the network cable to the machine until instructed to do so.

EtherTalk Environments

System configuration

As the machine supports EtherTalk protocol, you can print from Macintosh.

NOTE: You will need the optional PostScript Kit to use EtherTalk for printing.

Target computers

The machine supports a Macintosh or Power Macintosh with the following OS:

- Mac OS 7.5 or later, 8.x, 9.x, or Mac OS X 10.x

EtherTalk Installation

This section describes the installation procedure for using the machine in an EtherTalk environment.

Installation Procedure

There are three stages required to install the machine on an EtherTalk network.

Network Communication Setup

This requires the machine to be set up for EtherTalk.

Workstation Setup

Install the print driver (Adobe PS) for Macintosh.

Test Print

A test print should be submitted to make sure that the machine has been installed and configured correctly.

Network Communication Setup

This procedure is used to set up the network communication parameters of the machine.

At the machine, perform these steps.

NOTE: Keep the SNMP port enabled while you use the machine on the TCP/IP network.

NOTE: Some of the configuration options for this protocol are only available from CentreWare Internet Services.

Initially, boot the EtherTalk port.

1. Connect the machine to the network.
2. Press the <Log In/Out> button on the control panel, and then type the Key Operator login ID to enter the Key Operator mode.

NOTE: The passcode may also be required depending on the machine configuration.

3. Press the <Machine Status> button on the control panel, and then select the [Tools] tab on the screen.
4. Select [System Settings].
5. Select [Connectivity & Network Setup].
6. Select [Port Settings].
7. Select [EtherTalk], and then [Change Settings].
8. Select [Port Status] and then [Change Settings].
9. Select [Enabled], and then [Save].

Workstation Setup

Install the print driver (Adobe PS) for Macintosh. Install the screen font if necessary. Refer to the PostScript User Guide.

Test Print

To make sure that the machine has been installed on the network correctly a test print should be submitted from each client workstation. Perform the following steps.

1. Open a sample document on a client workstation.
2. Select the machine using the Chooser (Mac OS 9.2) or the Print Center (Mac OS X 10.x).
3. Print the document on the machine and verify that it prints correctly.
4. Make sure that the driver is installed on every workstation that will be sending jobs to the machine.
5. Repeat the test for all workstations that will be sending jobs to the machine.

The installation process is now complete.

If the test print fails, refer to *the Problem Solving chapter* for assistance.

8 Microsoft Networking

This chapter explains how to set up the machine to operate on a Microsoft network. The following information is provided.

Information Checklist – page 107

SMB Environments – page 108

SMB Installation – page 109

Installation Procedure – page 109

Network Communication Setup – page 109

Workstation Setup – page 111

Test Print – page 111

Information Checklist

Before starting the Microsoft networking installation procedures, make sure that the following items are available or have been performed.

Item	By
An existing operational Microsoft network is required. These procedures are not designed to install a Microsoft network.	Customer
Obtain and record the following information, if required: <ul style="list-style-type: none">• IP address• Gateway address• Subnet mask (for IPv4) / Prefix (for IPv6)• Host name Refer to the Glossary for additional information about the Gateway Address and Subnet mask, if needed.	Customer
Test the machine to make sure that it is installed fully and functioning correctly.	Customer
Install the print driver.	Customer

If problems are encountered during the installation, refer to *the Problem Solving chapter* for assistance.

CAUTION: Do not connect the network cable to the machine until instructed to do so.

SMB Environments

Server Message Block (SMB) is a protocol for sharing files or printers on Windows OS. This section explains the installation procedure for connecting a printer to a Windows network through SMB.

System configuration

As the machine supports SMB protocol, you can send print data directly to the machine on the same network without going through the server.

You can use TCP/IP. You will need to set up the IP address on the machine and the computer using TCP/IP.

NOTE: You can make SMB settings through CentreWare Internet Services.

Target computers

The following computers support printing through SMB.

Connection	OS	Protocol
Windows network	Windows 2000	TCP/IP
	Windows XP Windows Server 2003 Windows Vista	TCP/IP

NOTE: NetBEUI is not recommended by Microsoft to be used as a protocol in new networks. It is recommended that this protocol is only used in small networks where existing legacy clients require it.

SMB Installation

This section describes the installation procedure for using the machine on an SMB network.

Installation Procedure

The installation procedure is as follows.

Network Communication Setup

Enable the SMB port.

- If using TCP/IP, set the SMB port to [Enabled] using the touch screen or CentreWare Internet Services. Set the IP address on the control panel or CentreWare Internet Services.

Workstation Setup

Install the print driver on the computer.

Test Print

A print job should be submitted to make sure that the machine has been installed and configured correctly.

Network Communication Setup

This procedure is used to set up the network communication parameters of the machine.

At the machine, perform these steps.

NOTE: Keep the SNMP port enabled while you use the machine on the TCP/IP network.

NOTE: Some of the configuration options for this protocol are only available from the CentreWare Internet Services.

Initially, boot the SMB port.

1. Connect the machine to the network.
2. Press the <Log In/Out> button on the control panel, and then type the Key Operator login ID to enter the Key Operator mode.

NOTE: The passcode may also be required depending on the machine configuration.

3. Press the <Machine Status> button on the control panel, and then select the [Tools] tab on the screen.
4. Select [System Settings].
5. Select [Connectivity & Network Setup].

6. Select [Port Settings].
7. Select [SMB], and then [Change Settings].
8. Select [Port Status] and [Change Settings].
9. Select [Enabled], and then [Save].

Next, establish TCP/IP if you use an IP address for your network environment.

1. In [Connectivity & Network Setup], select [Protocol Settings].
2. Select [Protocol Settings].
3. Under [TCP/IP - IP Mode], select [IPv4 Mode], [IPv6 Mode], or [Dual Stack].

When [IPv4 Mode] or [Dual Stack] is selected

4. Select [IP Address Resolution], and then [Change Settings].
5. Select a method for establishing an IP address from [DHCP], [BOOTP], [RARP], [DHCP/Autonet], and [STATIC], and then select [Save].

NOTE: Use the DHCP server together with the Windows Internet Name Server (WINS) server.

If you selected [STATIC] in step 5, then proceed to step 6 to configure the protocol settings. Otherwise, proceed to step 12.

6. Select [IPv4 - IP Address], and then [Change Settings].
7. Use the keypad on the screen to enter the IP Address for the machine in the format "xxx.xxx.xxx.xxx". When you have finished entering all values, select [Save].
8. Select [IPv4 – Subnet Mask], and then [Change Settings].
9. Using the same method as in step 7, enter the Subnet Mask.
10. Select [IPv4 – Gateway Address], and then [Change Settings].

NOTE: If you do not wish to set the gateway address, leave this field blank.

11. Using the same method as in step 7, enter the Gateway Address.
12. Select [IPv4 – IP Filter], and then [Change Settings].
13. Select [Enabled] to filter access to the machine.

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

14. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

When [IPv6 Mode] or [Dual Stack] is selected

4. Set [IPv6 Address Manual Configuration].

NOTE: Select [Enabled] when the machine is connected to a network on which IPv6 stateless address autoconfiguration is disabled, or when you want to set a static IPv6 address.

If you selected [Enabled] in step 4, proceed to step 5. Otherwise, proceed to step 11.

5. Select [IPv6 – Manual IP Address Setup], and then [Change Settings].
6. Use the keypad on the screen to enter the IP Address for the machine in the format “xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx”. Select [Save].
7. Select [Manually Configured IPv6 Prefix], and then [Change Settings].
8. Set the IP address prefix, and then select [Save].
9. Select [IPv6 – Manual Gateway Setup], and then [Change Settings].
10. Using the same method as in step 6, set the gateway address.
11. Select [IPv6 – IP Filter], and then select [Enabled] or [Disabled].

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

12. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

Workstation Setup

Install the print driver on the NetWare client computer. Refer to the HTML document in PCL Print Driver CD-ROM.

Test Print

Make sure that the machine has been installed on the network correctly by submitting a test print from each client workstation. Perform the following steps.

1. Open a document on a client workstation.
2. Select the machine as the printer.
3. Print the document on the machine and verify that it prints correctly.
4. Make sure that the print driver is installed on every workstation that will be sending jobs to the machine.
5. Repeat the test for all workstations that will be sending jobs to the machine.

The installation process is now complete.

If the test print fails, refer to *the Problem Solving chapter* for assistance.

9 TCP/IP (LPD or Port9100)

This chapter explains how to set up the machine to print from a Windows computer through LPD or Port9100. The following information is provided.

Information Checklist – page 113

TCP/IP (LPD or Port9100) Environments – page 114

TCP/IP (LPD or Port9100) Installation – page 114

Installation Procedure – page 114

Network Communication Setup – page 115

Workstation Setup – page 117

Test Print – page 117

Information Checklist

Before starting these procedures, make sure that the following items are available or have been performed.

Item	By
An existing operational network utilizing TCP/IP is required. These procedures are not designed to install a network.	Customer
Obtain and record the following information: <ul style="list-style-type: none">• IP address• Gateway address• Subnet mask (for IPv4) / Prefix (for IPv6)• Host name Refer to the glossary for additional information about the Gateway Address and Subnet mask, if needed.	Customer
Test the machine to make sure that it is installed fully and functioning correctly.	Customer
Install the print driver.	Customer

If problems are encountered during machine setup, refer to *the Problem Solving chapter* for assistance.

CAUTION: Do not connect the network cable to the machine until instructed to do so.

TCP/IP (LPD or Port9100) Environments

System configuration

As the machine supports the LPD and Port9100 protocol, you can print directly from a Windows computer.

When printing through Port9100, change the necessary settings on the computers.

The transport protocol for LPD and Port9100 can be TCP/IP.

You will also need to set up the IP address on the machine and the Windows computers.

Target computers

The following computers support printing through LPD or Port9100.

Connection	OS	Protocol
LPD port	Windows 2000 Windows XP Windows Server 2003 Windows Vista	TCP/IP
Port9100	Windows 2000 Windows XP Windows Server 2003 Windows Vista	TCP/IP

NOTE: The optional PostScript Kit is required when you print from Macintosh.

TCP/IP (LPD or Port9100) Installation

This section describes how to set up the machine to use the LPD and Port9100 protocols.

Installation Procedure

There are three stages to enable printing to the machine through LPD or Port9100.

Network Communication Setup

Enable the following ports using the touch screen or CentreWare Internet Services.

- Printing through LPD: LPD port
- Printing through Port9100: Port9100 port

Set the IP address using the touch screen.

Workstation Setup

This requires the workstations in the networking environment to be configured to communicate with the machine.

Test Print

A print job should be submitted to make sure that the machine has been installed and configured correctly.

Network Communication Setup

This section describes how to set up the network communication parameters of the machine.

At the machine, perform these steps.

NOTE: Keep the SNMP port enabled while you use the machine on the TCP/IP network.

NOTE: Some of the configuration options for this protocol are only available from CentreWare Internet Services.

Initially, boot the LPD port or Port9100.

1. Connect the machine to the network.
2. Press the <Log In/Out> button on the control panel, and then type the Key Operator login ID to enter the Key Operator mode.
NOTE: The passcode may also be required depending on the machine configuration.
3. Press the <Machine Status> button on the control panel, and then select the [Tools] tab on the screen.
4. Select [System Settings].
5. Select [Connectivity & Network Setup].
6. Select [Port Settings].
7. If you are using the LPD port, select [LPD] and [Change Settings]. If you are using Port9100, select [Port9100] and [Change Settings].
8. If you are using the LPD port, select [Port Status] and [Change Settings]. If you are using Port9100, select [Port Status] and [Change Settings].
9. Select [Enabled] and [Save].

Next, establish TCP/IP.

1. In [Connectivity & Network Setup], select [Protocol Settings].
2. Under [TCP/IP - IP Mode], select [IPv4 Mode], [IPv6 Mode], or [Dual Stack].

When [IPv4 Mode] or [Dual Stack] is selected

3. Select [IP Address Resolution], and then [Change Settings].

4. Select a method for establishing an IP address from [DHCP], [BOOTP], [RARP], [DHCP/Autonet], and [STATIC], and then select [Save].

NOTE: Use the DHCP server together with the Windows Internet Name Server (WINS) server.

If you selected [STATIC] in step 4, then proceed to step 5 to configure the protocol settings. Otherwise, proceed to step 11.

5. Select [IPv4 - IP Address], and then [Change Settings].
6. Use the keypad on the screen to enter the IP Address for the machine in the format "xxx.xxx.xxx.xxx". When you have finished entering all values, select [Save].
7. Select [IPv4 – Subnet Mask], and then [Change Settings].
8. Using the same method as in step 6, enter the Subnet Mask.
9. Select [IPv4 – Gateway Address], and then [Change Settings].

NOTE: If you do not wish to set the gateway address, leave this field blank.

10. Using the same method as in step 6, enter the Gateway Address.
11. Select [IPv4 – IP Filter], and then [Change Settings].
12. Select [Enabled] to filter access to the machine.

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

13. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

When [IPv6 Mode] or [Dual Stack] is selected

3. Set [IPv6 Address Manual Configuration].

NOTE: Select [Enabled] when the machine is connected to a network on which IPv6 stateless address autoconfiguration is disabled, or when you want to set a static IPv6 address.

If you selected [Enabled] in step 3, proceed to step 4. Otherwise, proceed to step 10.

4. Select [IPv6 – Manual IP Address Setup], and then [Change Settings].
5. Use the keypad on the screen to enter the IP Address for the machine in the format "xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx". Select [Save].
6. Select [Manually Configured IPv6 Prefix], and then [Change Settings].
7. Set the IP address prefix, and then select [Save].
8. Select [IPv6 – Manual Gateway Setup], and then [Change Settings].
9. Using the same method as in step 5, set the gateway address.
10. Select [IPv6 – IP Filter], and then select [Enabled] or [Disabled].

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

11. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

Workstation Setup

Install print drivers on each client workstation that will be sending print jobs to the machine, and map to the machine as a printer. Refer to the HTML document in PCL Print Driver CD-ROM or document provided with the optional PostScript Kit.

Test Print

To make sure that the machine has been installed on the network correctly, a test print should be submitted from each client workstation. Perform the following steps.

1. Open a document on a client workstation.
2. Select the machine as the printer to which the selected document will be sent.
3. Print the document on the machine and verify that it prints correctly.
4. Make sure that the driver is installed on every workstation that will be sending jobs to the machine.
5. Repeat the test for all workstations that will be sending jobs to the machine.

The installation process is now complete.

If the test print fails, refer to *the Problem Solving chapter* for assistance.

10 USB Port

This chapter explains how to set up the machine in a USB port environment. The following information is provided.

Information Checklist – page 119

USB Port Environment – page 120

USB Port Installation – page 120

Installation Procedure – page 120

USB Port Communication Setup – page 121

Workstation Setup – page 121

Test Print – page 122

Information Checklist

Before starting the USB port installation procedures, make sure that the following items are available or have been performed.

Item	By
USB Cable	Customer
Test the machine to make sure that it is installed fully and functioning correctly.	Customer
Install the print driver.	Customer

NOTE: The installation procedures will install the machine on the USB port of the host workstation. The procedures are not intended to connect the host workstation to other workstations.

If problems are encountered during the installation of the machine, refer to *the Problem Solving chapter* for assistance.

CAUTION: Do not connect the USB cable to the machine until instructed to do so.

USB Port Environment

System configuration

The machine can be connected directly to the USB port of a host workstation. A document file can be sent from the host workstation via the USB port to the machine for printing. Other workstations can be connected via a network to the host workstation. Each workstation has a queue that can hold a number of files.

The document file is sent from the queue in the workstation to the queue in the host workstation, and then onto the queue in the machine to be printed.

Target computers

The following computers support printing through the USB port.

- Windows 98SE/Windows 2000/Windows ME/Windows XP/Windows Server 2003/Windows Vista
- Mac OS 8.6 through 9.2.2
- Mac OS X 10.X (10.1.5 or later)

NOTE: The optional PostScript Kit is required when you print from Macintosh.

USB Port Installation

Follow these installation procedures for using the machine on a USB port.

Installation Procedure

There are three stages required to install the machine on a USB port.

USB Port Communication Setup

This requires the machine to be set up for USB port printing.

Workstation Setup

This requires the workstation to be configured to print to the machine.

Test Print

A print job should be submitted to make sure that the machine has been installed and configured correctly.

USB Port Communication Setup

This section describes how to set up USB communication on the machine. The following parameters can be set depending on your requirements. These setups must be done without the USB cable connected.

This procedure is used to set up the USB communication parameters of the machine.

At the machine, perform these steps.

NOTE: Some of the configuration options for this protocol are only available from CentreWare Internet Services.

1. Press the <Log In/Out> button on the control panel, and then type the Key Operator login ID to enter the Key Operator mode.

NOTE: The passcode may also be required depending on the machine configuration.

2. Press the <Machine Status> button on the control panel, and then select the [Tools] tab on the screen.
3. Select [System Settings].
4. Select [Connectivity & Network Setup].
5. Select [Port Settings].
6. Select [USB], and [Change Settings].
7. Select the item to be set, and then select [Change Settings].
8. Select the required value, and then [Save].
9. Repeat steps 7 and 8, if required.

Depending on your requirements, select the following communication parameters on the machine.

- Port Status
- Print Mode
- PjL
- Auto Eject Time
- Adobe Communication Protocol

NOTE: Adobe Communication Protocol can be set when the PostScript Kit (optional) has been installed.

Workstation Setup

Before starting Workstation Setup, make sure that the USB cable is disconnected from the computer.

Then perform the following steps.

1. Refer to the HTML document in PCL Print Driver CD-ROM or document provided with the optional PostScript Kit, and install the print drivers for the machine on the workstation that will be sending jobs to the machine.
2. Connect the USB cable to the machine and the workstation.
3. Continue with *Test Print* on page 122.

Test Print

To make sure that the machine has been installed on the USB port correctly, submit a test print from each client workstation. Perform the following steps.

1. Open a document on a workstation.
2. Select the machine as the printer.
3. Print the document on the machine and verify that it prints correctly.
4. Repeat the test for all workstations that will be sending jobs to the machine.

The installation process is now complete.

If the test print fails, refer to *the Problem Solving chapter* for assistance.

11 IPP (Internet Printing Protocol)

This chapter explains how to set up the machine to operate in an IPP (Internet Printing Protocol) environment. The following information is provided.

Information Checklist – page 123

IPP Environment – page 124

IPP Installation – page 124

Installation Procedure – page 124

Network Communication Setup – page 125

Workstation Setup – page 127

Test Print – page 127

Information Checklist

Before starting the IPP installation procedures, make sure that the following items are available or have been performed.

Item	By
An existing operational TCP/IP network is required. These procedures are not designed to install a network.	Customer
Obtain and record the following information: <ul style="list-style-type: none">• IP address• Gateway address• Subnet mask (for IPv4) / Prefix (for IPv6)• Host name Refer to the glossary for additional information about the Gateway Address and Subnet mask, if needed.	Customer
Test the machine to make sure that it is installed fully and functioning correctly.	Customer
Install the print driver.	Customer

If problems are encountered during the installation of the machine, refer to *the Problem Solving chapter* for assistance.

CAUTION: Do not connect the network cable to the machine until instructed to do so.

IPP Environment

System configuration

The machine supports Internet Printing Protocol (IPP). As Windows 2000/Windows XP/Windows Server 2003/Windows Me/Windows Vista are installed with the client software needed to output to an IPP printer, you can specify this printer using the Add Printer Wizard. Using IPP, you can print to a remote printer through the Internet or intranet.

The transport protocol for IPP can be TCP/IP.

Target computers

The following computers support IPP.

Connection	OS	Protocol
IPP port	Windows 2000 Windows XP Windows Server 2003 Windows Me Windows Vista	TCP/IP

NOTE: For Internet printing from a Windows Me computer, the IPP port should be installed. For the IPP port installation, see the Windows Me documentation.

IPP Installation

Use the following procedure to install and use the machine in an IPP environment.

Installation Procedure

There are three stages.

Network Communication Setup

The machine needs to be set up for IPP.

Workstation Setup

The workstation needs to be configured to submit print data to the machine.

Test Print

A print job should be submitted to make sure that the machine has been installed and configured correctly.

Network Communication Setup

This section describes how to set up the network communication parameters of the machine.

At the machine, perform these steps.

NOTE: Keep the SNMP port enabled while you use the machine on the TCP/IP network.

NOTE: Some of the configuration options for this protocol are only available from the CentreWare Internet Services.

Initially, enable the IPP port.

1. Connect the machine to the network.
2. Press the <Log In/Out> button on the control panel, and then type the Key Operator login ID to enter the Key Operator mode.

NOTE: The passcode may also be required depending on the machine configuration.

3. Press the <Machine Status> button on the control panel, and then select the [Tools] tab on the screen.
4. Select [System Settings].
5. Select [Connectivity & Network Setup].
6. Select [Port Settings].
7. Select [IPP], and then [Change Settings].
8. Select [Port Status], and then [Change Settings].
9. Select [Enabled], and then [Save].

Next, establish TCP/IP.

1. In [Connectivity & Network Setup], select [Protocol Settings].
2. Under [TCP/IP - IP Mode], select [IPv4 Mode], [IPv6 Mode], or [Dual Stack].

When [IPv4 Mode] or [Dual Stack] is selected

3. Select [IP Address Resolution], and then [Change Settings].
4. Select a method for establishing an IP address from [DHCP], [BOOTP], [RARP], [DHCP/Autonet], and [STATIC], and then select [Save].

NOTE: Use the DHCP server together with the Windows Internet Name Server (WINS) server.

If you selected [STATIC] in step 4, then proceed to step 5 to configure the protocol settings. Otherwise, proceed to step 11.

5. Select [IPv4 - IP Address], and then [Change Settings].

6. Use the keypad on the screen to enter the IP Address for the machine in the format “xxx.xxx.xxx.xxx”. When you have finished entering all values, select [Save].

7. Select [IPv4 – Subnet Mask], and then [Change Settings].

8. Using the same method as in step 6, enter the Subnet Mask.

9. Select [IPv4 – Gateway Address], and then [Change Settings].

NOTE: If you do not wish to set the gateway address, leave this field blank.

10. Using the same method as in step 6, enter the Gateway Address.

11. Select [IPv4 – IP Filter], and then [Change Settings].

12. Select [Enabled] to filter access to the machine.

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

13. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

When [IPv6 Mode] or [Dual Stack] is selected

3. Set [IPv6 Address Manual Configuration].

NOTE: Select [Enabled] when the machine is connected to a network on which IPv6 stateless address autoconfiguration is disabled, or when you want to set a static IPv6 address.

If you selected [Enabled] in step 3, proceed to step 4. Otherwise, proceed to step 10.

4. Select [IPv6 – Manual IP Address Setup], and then [Change Settings].

5. Use the keypad on the screen to enter the IP Address for the machine in the format “xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx”. Select [Save].

6. Select [Manually Configured IPv6 Prefix], and then [Change Settings].

7. Set the IP address prefix, and then select [Save].

8. Select [IPv6 – Manual Gateway Setup], and then [Change Settings].

9. Using the same method as in step 5, set the gateway address.

10. Select [IPv6 – IP Filter], and then select [Enabled] or [Disabled].

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

11. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

Workstation Setup

Install a print driver on each client workstation that will be sending print jobs to the machine, and map to the machine as a printer. Refer to the HTML document in PCL Print Driver CD-ROM, for additional information.

"/ipp" needs to be entered at the end of the string in order for the printer to be discovered.

If you specify the printer using the IP address, use one of the following formats depending on your machine configuration. The IPv6 format is supported on Windows Vista only. An IPv6 address needs to be enclosed in square brackets.

(For IPv4) `http://xxx.xxx.xxx.xxx/ipp`

(For IPv6) `http://[xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx]/ipp`

Test Print

To make sure that the machine has been installed on the network correctly a test print should be submitted from each client workstation. Perform the following steps.

1. Open a document on a client workstation.
2. Select the machine as the printer to which the selected document will be sent.
3. Print the document on the machine and verify that it prints correctly.
4. Make sure that the driver is installed on every workstation that will be sending jobs to the machine.
5. Repeat the test for all workstations that will be sending jobs to the machine.

The installation process is now complete.

12 E-mail

This chapter explains how to set up the E-mail feature of the machine. The following information is provided.

E-mail Overview – page 129

Information Checklist – page 130

E-mail Environments – page 131

E-mail Installation – page 131

Installation Procedure – page 131

Network Communication Setup – page 132

Test Mail – page 135

E-mail Overview

You can send and receive E-mails using the machine.

When sending and receiving an E-mail, the following features are available.

- Scan to E-mail
- E-mail Print
- Mail Notice Service
- Notify Job End by E-mail

Scan to E-mail

If the optional Scan To E-mail Kit is installed in the machine, you can send a scanned document as an E-mail attachment to one or more E-mail address destinations. You can select the format of the scanned data to be TIFF, JPEG, PDF, or XPS.

E-mail Print

You can send an E-mail with an image attachment, such as a TIFF, JPG or PDF file, from a computer to the machine. Upon receiving the E-mail, the machine will print it out automatically.

Mail Notice Service

You can set the machine to send an E-mail to a specified address. The E-mail will give notice whenever an error occurs on the machine, or a history of failed E-mail reception requests or print requests.

You can also configure so that an E-mail is sent notifying the completion of a print job which has been requested from your computer.

Notify Job End by E-mail

This is one of the Mail Notice Service features described in the previous paragraph.

You can configure the machine to notify the end of a print job via E-mail. On your print driver, enable this feature and specify the addresses to notify print job completion. For information about how to make settings, refer to the print driver's Help.

Information Checklist

Before enabling the E-mail feature, make sure that the following items are available or have been performed.

Item	By
An existing operational network utilizing TCP/IP is required. These procedures are not designed to install a network.	Customer
Obtain and record the following information: <ul style="list-style-type: none"> • IP address • Gateway address • Subnet mask (for IPv4) / Prefix (for IPv6) • Machine Host name • Machine E-Mail Account • SMTP Server Address or Server Name • DNS Server Name if Mail Server Names are used instead of Mail Server Addresses. • LDAP Server Address if global search is required. Refer to the Glossary for additional information about the Gateway Address and Subnet mask.	Customer
Set up the mail server and E-mail accounts.	Customer
Test the machine to make sure that it is installed fully and functioning correctly.	Customer
Install the Scan To E-mail Kit.	Xerox

NOTE: You must have an Internet service provider if you wish to acquire an E-mail account through ISP.

E-mail Environments

System Requirements

The following are required for the machine.

- Scan To E-mail Kit is required to send scanned documents as E-mail attachments.
- The machine is connected to the network using TCP/IP.
- The environment allows the sending and receiving of E-mail.

Item	Correspondent Specifications
ITU-T Recommendations	ITU-T T.37, T.30, F.185 and E.164
E-mail forwarding	RFC2304, RFC2305
DSN function	RFC1891, 1894
MDN function	RFC2298
SMTP receiving	RFC821, 822, 1869
POP3 receiving	RFC1939
MIME version	Version1.0 (RFC2049)

NOTE: A file may not print if the format differs from those in the above table.

NOTE: It is recommended to use Microsoft Outlook Express 5.5/6.0 or Netscape 7 as E-mail software.

E-mail Installation

This section describes how to enable the E-mail feature.

Installation Procedure

To use the E-mail feature, configure the following settings on the machine.

Network Communication Setup

1. Connect the machine to the network.
2. Press the <Log In/Out> button on the control panel, and then type the Key Operator login ID to enter the Key Operator mode.

NOTE: The passcode may also be required depending on the machine configuration.

3. Press the <Machine Status> button on the control panel, and then select the [Tools] tab on the screen.

4. Select [System Settings].
5. Select [Connectivity & Network Setup].
6. Select [Port Settings].
7. For each of the following items,
 - Scan to E-mail: [Send E-mail]
 - E-mail Print: [Receive E-mail]
 - Mail Notification Service: [Mail Notice Service]
8. Select the item, select [Change Settings], select [Change Settings] again, make any changes as needed, and then select [Save].
9. Set or verify the IP address following the steps in the Network Communication Setup section, below.
10. Set the other items required for the E-mail feature following the steps in the Email Setting Setup section.

Test Mail

The E-mail job should be submitted to make sure that the machine has been installed and configured correctly.

Network Communication Setup

NOTE: Some of the configuration options for this protocol are only available from CentreWare Internet Services.

NOTE: Keep the SNMP port enabled while you use the machine on the TCP/IP network.

Initially, activate the ports for E-mail.

1. Connect the machine to the network.
2. Press the <Log In/Out> button on the control panel, and then type the Key Operator login ID to enter the Key Operator mode.

NOTE: The passcode may also be required depending on the machine configuration.

3. Press the <Machine Status> button on the control panel, and then select the [Tools] tab on the screen.
4. Select [System Settings].
5. Select [Connectivity & Network Setup].
6. Select [Port Settings].
7. Select the required port and then [Change Settings].
 - Scan to E-mail: [Send E-mail]
 - E-mail Print: [Receive E-mail]
 - Mail Notice Service/Notify Job End by E-mail: [Mail Notice Service]

8. Select [Port Status], and then [Change Settings].
9. Select [Enabled], and then [Save].

Next, establish TCP/IP.

1. In [Connectivity & Network Setup], select [Protocol Settings].
2. Under [TCP/IP - IP Mode], select [IPv4 Mode], [IPv6 Mode], or [Dual Stack].

When [IPv4 Mode] or [Dual Stack] is selected

3. Select [IP Address Resolution], and then [Change Settings].
4. Select a method for establishing an IP address from [DHCP], [BOOTP], [RARP], [DHCP/Autonet], and [STATIC], and then select [Save].

NOTE: Use the DHCP server together with the Windows Internet Name Server (WINS) server.

If you selected [STATIC] in step 4, then proceed to step 5 to configure the protocol settings. Otherwise, proceed to step 11.

5. Select [IPv4 - IP Address], and then [Change Settings].
6. Use the keypad on the screen to enter the IP Address for the machine in the format "xxx.xxx.xxx.xxx". When you have finished entering all values, select [Save].
7. Select [IPv4 – Subnet Mask], and then [Change Settings].
8. Using the same method as in step 6, enter the Subnet Mask.
9. Select [IPv4 – Gateway Address], and then [Change Settings].

NOTE: If you do not wish to set the gateway address, leave this field blank.

10. Using the same method as in step 6, enter the Gateway Address.
11. Select [IPv4 – IP Filter], and then [Change Settings].
12. Select [Enabled] to filter access to the machine.

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

13. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

When [IPv6 Mode] or [Dual Stack] is selected

3. Set [IPv6 Address Manual Configuration].

NOTE: Select [Enabled] when the machine is connected to a network on which IPv6 stateless address autoconfiguration is disabled, or when you want to set a static IPv6 address.

If you selected [Enabled] in step 3, proceed to step 4. Otherwise, proceed to step 10.

4. Select [IPv6 – Manual IP Address Setup], and then [Change Settings].

5. Use the keypad on the screen to enter the IP Address for the machine in the format “xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx”. Select [Save].
6. Select [Manually Configured IPv6 Prefix], and then [Change Settings].
7. Set the IP address prefix, and then select [Save].
8. Select [IPv6 – Manual Gateway Setup], and then [Change Settings].
9. Using the same method as in step 5, set the gateway address.
10. Select [IPv6 – IP Filter], and then select [Enabled] or [Disabled].

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

11. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

E-mail Setting Setup

Finally, set the other items required for the E-mail feature.

1. Select [System Settings].
2. Select [Connectivity & Network Setup].
3. Select the following items, and then [Change Settings].
 - [Machine's E-mail Address/Host Name]
 - E-mail Address
 - Machine Name
 - Host Name – This is the SMB Host Name of the device
 - Domain Name – This is the DNS information. It has to be set via CentreWare Internet Services when e-mail server names are used (host names are used instead of IP addresses) AND the DNS IP address is left blank.
 - [Outgoing/Incoming E-mail Settings] > [POP3 Server Settings]: when receiving E-mail via POP3
 - POP3 Server Name/Address – If server name is used, then DNS needs to be configured properly via CentreWare Internet Services.
 - POP3 Server Port Number
 - POP3 Server Check Interval
 - POP3 Server Login name – POP3 login name used for SMTP Authentication.
 - POP3 Server Password – POP3 password used for SMTP Authentication.
 - POP3 Password Encryption
 - [Outgoing/Incoming E-mail Settings] > [SMTP Server Settings]: when sending or receiving E-mail via SMTP

- SMTP Server Name/Address – If server name is used then DNS needs to be configured properly via CentreWare Internet Services.
 - SMTP Server Port Number
 - E-mail Send Authentication
 - SMTP AUTH Login Name – SMTP login name used for SMTP Authentication.
 - SMTP AUTH Password – SMTP password used for SMTP Authentication.
 - [Outgoing/Incoming E-mail Settings] > [Domain Filtering]: if required
 - Domain Filtering – This field will be populated ONLY if restriction is required on sending mail to certain domains.
 - Domain 1 to 50
 - [Other Settings]
 - E-mail Receive Protocol
 - Output Destination for E-mail
4. Select [Save]

Test Mail

To make sure that E-mail has been set up successfully, perform the following steps:

Scan to E-mail

1. Load a document.
2. Select [E-mail] on the Menu screen.
3. Select the required features for the job.
4. Enter the E-mail address of the recipient.
5. Press the <Start> button.

The document will be scanned and converted to the format that you specified. Then it will be sent as an E-mail attachment.

E-mail Print

1. Use your E-mail software to create an E-mail and then attach a TIFF, JPEG, or PDF document.
2. Enter the E-mail address of the receiving machine.
3. Send the E-mail.
4. After the machine has received the E-mail, printing starts automatically.

13 Scanning Services

This chapter explains how to set up Scanning Services in the supported environments. The following information is provided.

Scanning Overview – page 137

Scanning with the machine – page 137

Scanning Process – page 138

Scan to E-mail Setup – page 138

Scan to Mailbox Setup – page 142

Network Scanning Setup – page 144

Remote Authentication Setup (If Required) – page 145

Scan to PC Setup (FTP) – page 147

Scan to PC Setup (SMB) – page 148

Scanning Overview

Scanning Services brings the versatility of network scanning to the workstation. By combining the power of the machine, CentreWare Internet Services, and third-party applications, scanning services provides a network solution for all scanning requirements.

Scanning features can be programmed and documents can then be scanned and transferred to a file server. You can access those documents from your workstation, or share them with other users connected to the network.

The stored scanned document can be opened by any software application that can view or edit TIFF/PDF/JPEG/XPS files.

NOTE: XPS stands for XML Paper Specification.

Scanning with the machine

Scanning services enables multiple users to use the machine to scan and store documents. With the power of the local area network, multiple users can access the machine and use it to scan documents.

To perform network scanning, the machine must be installed on a local area network using TCP/IP protocol. To retrieve a scanned document file, it must be transferred to a file server.

NOTE: ASCII characters are used for the user name, password, and all job template fields when assigned using Scanning Services.

Scanning Process

The machine has five types of scanning functions.

- Scan to E-mail
- Scan to Mailbox
- Network Scanning
- Scan to PC (FTP)
- Scan to PC (SMB)

The setup procedures are as follows.

Scan to E-mail Setup

Hard copies can be scanned at the machine and sent to remote clients as e-mail attachments in Single TIFF, Multi TIFF, PDF, XPS, or JPEG format. SMTP and POP3 mail servers are used to send and receive e-mail respectively.

NOTE: XPS stands for XML Paper Specification.

Prerequisites for Scan to E-mail Setup

1. Confirm that an existing operational network using TCP/IP is available.
2. Confirm that DNS and the Domain Name have been correctly setup for the multifunction machine.
3. Confirm that the following ports are enabled:
 - Scan to E-mail: [Send E-mail]
 - E-mail Print: [Receive E-mail]
 - Mail Notice Service/Notify Job End by E-mail: [E-mail Notification Service]

Data to Set Up E-mail	Install Requirement	Comments
SMTP mail server Host Name or IP address	Required	If using an external mail server, your Internet Service Provider will provide you with the mail server name or IP address.
SMTP login/password	Required*	
WorkCentre E-mail address	Required	
Local e-mail addresses	Optional	A Local Address Book can be created to store e-mail addresses.
LDAP server address can be enabled	LDAP Host Name	Displays only e-mail addresses on the corporate (LDAP) internal address book.

Data to Set Up E-mail	Install Requirement	Comments
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* Only if the SMTP server requires login and password for authentication.

Procedure for Scan to E-mail Setup

1. From a workstation, open up a web browser (such as Internet Explorer), and then enter the machine's IP address. If connected properly, you should see a CentreWare Internet Service web page for your machine.

NOTE: If you are to enter the IP address, use one of the following formats depending on your machine configuration. The IPv6 format is supported on Windows Vista only. An IPv6 address needs to be enclosed in square brackets.

(For IPv4) `http://xxx.xxx.xxx.xxx`

(For IPv6) `http://[xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx]`

NOTE: If a port number is set, append it to the Internet address as follows. In the following example, the port number is 80. The IPv6 format is supported on Windows Vista only. An IPv6 address needs to be enclosed in square brackets.

(For IPv4) `http://xxx.xxx.xxx.xxx:80`

(For IPv6) `http://[xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx]:80`

2. Set up the SMTP server configuration via CentreWare Internet Services:
 - 1) Click the [Properties] tab.
 - 2) Click the [Connectivity] folder, and then the [Protocols] folder.
 - 3) Click [SMTP Server].
 - 4) Enter the SMTP mail server Host Name or IP address and Port number (the default is port 25).
 - 5) Click on [Apply].
3. Set up the Machine E-mail address:
 - 1) Click the [Properties] tab.
 - 2) Click on [Description].
 - 3) Set [Machine's E-mail Address].
 - 4) Click on [Apply].
4. On the machine, load a sample document that you want to e-mail into the document feeder.
5. Select the [E-mail] button on the touch screen.
6. There are three ways to specify an e-mail destination:
 - Select [New Recipient] to type e-mail addresses using the screen keyboard.
 - Select [Address Book], and then select [List all public entries] or [Search Public] from the drop-down menu to select e-mail addresses.

- If LDAP is enabled, you can select [Address Book], and then select [Search Network] from the drop-down menu to select e-mail addresses.
- 7.** Press the <Start> button on the machine.
 - 8.** Verify that the recipient(s) received the e-mail with the document attached.

Scan to E-mail Troubleshooting

For internal corporate mail servers, substitute the word "Corporate" for "ISP" in the following troubleshooting table.

Symptom	Possible Cause	Resolution/Validation
SMTP error at multifunction machine	Incorrect Mail Server or Host Name	Validate that the correct ISP mail server name has been entered in the SMTP Host Name field.
	Incorrect settings in Microsoft Outlook Express	Verify that you can access the ISP mail server from within Microsoft Outlook Express and that all settings are correct.
	Incorrect multifunction machine e-mail address entered	Verify that the machine is using the correct e-mail address in the From: field. The E-mail address must match what the ISP's mail server is expecting.
	ISP requires SMTP authentication to their mail server	Check with your ISP to determine if this is a requirement. If so, enable SMTP authentication for the multifunction machine via CentreWare Internet Services.
	ISP does not allow mail on the standard port number 25	Check with your ISP to determine if this is a problem. Ask if they can accept mail on another port number. If so, change the SMTP port number for the multifunction machine via CentreWare Internet Services.
	ISP requires login to the e-mail account via Microsoft Outlook Express before allowing mail to be sent	Check with your ISP to determine if this is a requirement. If so, login to the Microsoft Outlook Express account, and then try sending the e-mail. If this is successful, you can set Outlook Express to check e-mail every 5 or 10 minutes for the multifunction machine's e-mail account.

Scan to Mailbox Setup

This feature allows documents to be stored in a mailbox (public or private) for future processing.

Prerequisites for Scan to Mailbox Setup

Confirm that an existing operational network utilizing TCP/IP is available.

Target Computers

- Windows 2000/Windows XP/Windows Server 2003/Windows Vista

Data to Set Up Scan to Mailbox	Install Requirement	Comments
Mailboxes are created on the machine	Required	
Scan Driver is installed	Optional	This utility can be installed from the CD-ROM to view/print scanned documents.
CentreWare Internet Services	Optional	CentreWare Internet Services can be used to create/edit mailboxes and view/print scanned documents stored in mailboxes.

Procedure for Scan to Mailbox Setup through CentreWare Internet Services

1. From a workstation, open up a web browser (such as Internet Explorer), and then enter the machine's IP address. If connected properly, you should see a CentreWare Internet Services web page for your machine.

NOTE: If you are to enter the IP address, use one of the following formats depending on your machine configuration. The IPv6 format is supported on Windows Vista only. An IPv6 address needs to be enclosed in square brackets.

(For IPv4) `http://xxx.xxx.xxx.xxx`

(For IPv6) `http://[xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx]`

NOTE: If a port number is set, append it to the Internet address as follows. In the following example, the port number is 80. The IPv6 format is supported on Windows Vista only. An IPv6 address needs to be enclosed in square brackets.

(For IPv4) `http://xxx.xxx.xxx.xxx:80`

(For IPv6) `http://[xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx]:80`

2. Create mailboxes:
 - 1) Click the [Scan] tab.

- 2) Click the [Mailboxes] folder.
- 3) Click the [Create] button for a mailbox.
- 4) Enter the appropriate information.
- 5) Click on [Apply].

NOTE: If a passcode is set for the mailbox, entering the passcode will be required each time a user accesses the mailbox.

3. From the touch screen, select [Scan to Mailbox].
 - 1) Select the mailbox number to which you want to scan the document.
 - 2) Load the sample document into the document feeder.
 - 3) Press the <Start> button on the machine.
4. Verify that the scanned document is in the mailbox:
 - 1) Select the mailbox number to which the document was scanned.
 - 2) Select [Document List].

Procedure for Scan to Mailbox Setup through the Control Panel

1. Press the <Machine Status> button on the control panel.
2. Select the [Tools] tab.
3. Under [Setup & Calibration], select [Setup] and then [Create Mailbox].
4. Select a mailbox number, and then select [Create/Delete].
5. Set the information.

NOTE: If the mailbox is passcode-protected, entering the passcode will be required each time a user accesses the mailbox. If a passcode is entered for a mailbox, no one else can access that mailbox before entering the passcode.

6. From the [All Services] menu, select [Scan to Mailbox].
 - 1) Select the mailbox number to which you want to scan the document.
 - 2) Load the sample document into the document feeder.
 - 3) Press the <Start> button on the machine.
7. Verify that the scanned document is in the mailbox:
 - 1) Select the mailbox number to which the document was scanned.
 - 2) Select [Document List].

Workstation Setup

To retrieve scanned documents, install the scan driver or activate CentreWare Internet Services. For more information about the operating environment for the scan driver and the installation method, refer to the HTML document in PCL Print Driver CD-ROM.

Network Scanning Setup

Network scanning uses the FTP or SMB protocol to transfer scanned documents on to a server or a client. Templates and repositories (folders) need to be set up to enable network scanning.

See the Quick Network Setup Guide for information about how to set up templates, repositories, transfer protocols, and enabling ports.

Prerequisites for Network Scanning Setup

1. Confirm that an existing operational network utilizing TCP/IP is available.
2. Confirm that your transfer protocol (FTP/SMB) is configured correctly.
For more details, refer to *Scan to PC Setup (FTP) on page 147* or *Scan to PC Setup (SMB) on page 148*.
3. Repository (folder) needs to be created on the FTP or SMB server to hold scanned documents.
4. Confirm that the following ports are enabled:
 - 1) TCP/IP Port
 - 2) FTP Client Port or SMB Port (depending on which protocol is used)

Data to Set Up Network Scanning	Install Requirement	Comments
Templates are created via CentreWare Internet Services or any other Xerox Network Scanning Solutions.	Required	
Repositories are created via CentreWare Internet Services or any other Xerox Network Scanning Solutions.	Required	
Kerberos IP Address	Optional	If Remote Authentication is required, then Kerberos needs to be enabled.

Procedure for Network Scanning Setup

1. Create templates and repositories via CentreWare Internet Services.
2. On the control panel, select [Network Scanning].
3. Select a template from the list. You can also change any other value from the control panel without impacting the template configuration; only the current job will be affected.
4. Load a sample document into the document feeder.
5. Press the green <Start> button on the machine. The job is sent to the server using FTP or SMB protocol as defined within the template.

6. Log on to the FTP or SMB server. Navigate to the repository (destination) that was specified earlier. Your scanned document is located in that folder.

NOTE: If Kerberos (remote authentication) has been enabled, a separate login screen appears when the Network Scanning feature is selected. Documents are not scanned in unless the server authenticates user access.

Remote Authentication Setup (If Required)

The machine uses Kerberos for Windows and Kerberos for Solaris for user authentication. When enabled, user access to scanning features (excluding Scan to Mailbox) will be constrained. A popup message will prompt the user to enter a login and password before using the scanning features. The login and password will be passed to the Kerberos server. Only when the user is authenticated the feature will be made available.

Information Checklist

Item	By
An existing operational network utilizing TCP/IP is required. These procedures are not designed to install a network	Customer
Obtain and record the following information: <ul style="list-style-type: none"> • Remote Server IP address • Remote Server Name • DNS Address if Host Name is used instead of the IP address name • Remote Server Realm Name 	Customer

When using Scan to E-mail, Kerberos authentication has the following effect on the feature:

1. Select [Scan to Mailbox].
2. A login/password popup is displayed requiring the user to provide a username and password to the Kerberos server. Enter the login and password.

The device passes the login and password to the Kerberos server and if a match is found, the user is successfully authenticated.

The "From:" field of the e-mail is automatically populated with the device login name and e-mail address created at the time of the device configuration.

If SMTP server requires authentication, the device will use the SMTP username/password created at the configuration of the device before sending an e-mail to the server.

When using Scan to PC, Kerberos authentication has the following effect on the feature:

1. Select [Scan to PC].

2. A login/password popup will be displayed to authenticate users with the Kerberos server. Enter the login and password.

The login and password is passed on to the Kerberos server and if a match is found the user is successfully authenticated.

The user needs to enter a valid login and password for the FTP/SMB server. This may or may not be the user's Kerberos login/password, rather it is a login/password that is accepted by the FTP/SMB server.

When using Network Scanning, Kerberos authentication has the following effect on the feature:

1. Select [Network Scanning].
2. A login/password popup will be displayed to authenticate users with the Kerberos server. Enter the login and password.

The login and password is passed on to the Kerberos server and if a match is found the user is successfully authenticated.

Through the templates/repositories, the users will enter a valid login/password for FTP/SMB servers. This may or may not be the user login/password; rather it is a login/password that is accepted by the FTP/SMB server.

Public templates are accessible to any user. Private templates require a password that may or may not be different from the Kerberos password.

Remote Authentication Network Communication Setup

1. Connect the machine to the network.
 2. Press the <Log In/Out> button on the control panel, and then type the Key Operator login ID to enter the Key Operator mode.
- NOTE:** The passcode may also be required depending on the machine configuration.
3. Press the <Machine Status> button on the control panel, and then select the [Tools] tab on the screen.
 4. Select [System Settings].
 5. Select [Connectivity & Network Setup].
 6. Select [Remote Authentication Server Settings].
 7. Select [Authentication System], and then select [Change Settings] and choose [Kerberos (Windows 2000)] or [Kerberos (Solaris)]. Select [Save], if needed.
 8. Select [Kerberos Server Settings], then [Kerberos Server 1], and then select [Change Settings]. Select [Primary Server Name / Address] to enter the IP address or server name, and then select [Change Settings]. When you entered the server name, the DNS information needs to be populated through Internet Services.
 9. Select [Primary Server Port Number] and enter the port number. The default is Port 88.

10. Repeat steps 8 and 9 for the Secondary Server settings.
11. Select [Domain Name] and enter the domain name. This is the fully qualified domain which Kerberos server supports.

Enabling Remote Authentication

1. Connect the machine to the network.
2. In the Key Operator mode, press the <Machine Status> button on the control panel, and then select the [Tools] tab on the screen.
3. Select [Authentication/Security Settings], then [Authentication].
4. Set the authentication method to enable Kerberos. Select [Login type], then [Remote Access] followed by [Save].

Scan to PC Setup (FTP)

Files can be scanned on the multifunction machine and routed on to a server or a client using FTP protocol. Directory structures (repositories) need to be created on the server to hold the scanned documents.

See the Quick Network Setup Guide for information about how to set up templates, repositories, transfer protocols, and enabling ports.

Prerequisites for Scan to PC (FTP)

1. Confirm that an existing operational network utilizing TCP/IP is available.
2. FTP Server/Client exists and is running.
3. Repository (folder) needs to be created on the FTP server to hold the scanned document.
4. Confirm that the following ports are enabled:
 - 1) TCP/IP
 - 2) FTP Client

Data to Set Up Scan to PC (FTP)	Install Requirement	Comments
Repositories need to be set up on the FTP server.	Required	This is the location or path of the directory for saving scanned documents.
Server IP Address	Required	This is the IP address of the FTP server.
FTP Login/password information	Optional	This is required if the FTP server requires login/password authentication. Most FTP servers require a login/password.
Kerberos IP Address	Optional	If Remote Authentication is required, then Kerberos needs to be enabled.

Procedure for Scan to PC (FTP)

1. On the control panel, select [Scan to PC].
2. Enter all the information required.
3. Load a sample document into the document feeder.
4. Press the <Start> button on the machine.
5. Logon to the FTP server. Navigate to the directory path (repository) that was set up earlier on the server. Your scanned document can be found in the specified directory.

NOTE: If Kerberos authentication (remote authentication) has been enabled, a separate login screen appears when the Scan to PC (FTP) feature is selected. Documents are not scanned in unless the Kerberos server authenticates user access.

Scan to PC Setup (SMB)

Files can be scanned on the multifunction machine and routed on to a server or a client using SMB protocol. Directory structures (repositories) need to be created on the server to hold the scanned documents.

See the Quick Network Setup Guide for information about how to set up templates, repositories, transfer protocols, and enabling ports.

Prerequisites for Scan to PC Setup (SMB)

1. Confirm that an existing operational network utilizing TCP/IP is available.
2. SMB Server exists and is running.
3. Repository (folder) needs to be created on the SMB server to hold the scanned document.
4. Confirm that the following ports are enabled:
 - 1) TCP/IP Port
 - 2) SMB Port

Data to Set Up Scan to PC (SMB)	Install Requirement	Comments
Server IP address	Required	This is the IP address of the SMB server.
Server Shared Name	Required	This is the name assigned to the shared folder on the SMB server.
Repository – directory path, where the document will be stored on the SMB server	Required	This is the location or path of the directory for saving scanned documents.

Data to Set Up Scan to PC (SMB)	Install Requirement	Comments
SMB Login/password information	Optional	This is required, if the SMB server requires login/password authentication. Most SMB servers require a login/password.
Kerberos IP Address	Optional	If Remote Authentication is required, then Kerberos needs to be enabled.

Procedure for Scan to PC (SMB)

1. On the control panel, select [Scan to PC].
2. Enter all the information required.
3. Load a sample document into the document feeder.
4. Press the <Start> button on the machine.
5. Logon to the SMB server. Navigate to the directory path (repository) that was set up earlier on the server. Your scanned document can be found in the specified directory.

NOTE: If Kerberos authentication (remote authentication) has been enabled, a separate login screen appears when the Scan to SMB feature is selected. Documents are not scanned in unless the Kerberos server authenticates user access.

14 Internet Fax

This chapter explains how to set up the Internet Fax feature of the machine. The following information is provided.

Internet Fax Overview – page 151

Information Checklist – page 151

Internet Fax Environments – page 152

Internet Fax Installation – page 152

Installation Procedure – page 152

Network Communication Setup – page 153

Test Internet Fax – page 156

Internet Fax Overview

If the Internet Fax software key is installed with the optional Fax Kit in the machine, you can send and receive the scanned data as attachments, via an intranet or the Internet. This differs from a facsimile that transmits the data via a telephone line.

Information Checklist

Before enabling this feature, make sure that the following items are available or have been performed.

Item	By
An existing operational network utilizing TCP/IP is required. These procedures are not designed to install a network.	Customer
Obtain and record the following information: <ul style="list-style-type: none">• IP address• Gateway address• Subnet mask (for IPv4) / Prefix (for IPv6)• Host name Refer to the Glossary for additional information about the Gateway Address and Subnet mask.	Customer
Set up the mail server and E-mail accounts.	Customer
Test the machine to make sure that it is installed fully and functioning correctly.	Customer
Install the Internet Fax Kit.	Xerox

Internet Fax Environments

System Requirements

The following are required for the machine.

- Fax Kit
- The machine is connected to the network using TCP/IP.
- The environment allows the sending and receiving of E-mail.

Item	Correspondent Specifications
ITU-T Recommendations	ITU-T T.37, T.30, F.185 and E.164
Internet Fax format	Sending: RFC2301 (TIFFprofileS/F/J) and 600 x 600 dpi Receiving: RFC2301 (TIFFprofileS/F/J/C)
Facsimile forwarding	RFC2304, RFC2305
DSN function	RFC1891, 1894
MDN function	RFC2298
SMTP receiving	RFC821, 822
POP3 receiving	RFC1939
MIME version	Version1.0 (RFC2049)

NOTE: A file may not print if the format differs from those in the above table.

Internet Fax Installation

This section describes how to enable the Internet Fax feature.

Installation Procedure

To use the Internet Fax feature, configure the following settings on the machine.

Network Communication Setup

Use the touch screen to set the following ports to [Enabled].

- Receive E-mail
- Send E-mail

Then, set the IP address.

Finally, set the other items required for the Internet Fax feature.

Test Internet Fax

An Internet Fax job should be submitted to make sure that the machine has been installed and configured correctly.

Network Communication Setup

NOTE: Some of the configuration options for this protocol are only available from CentreWare Internet Services.

NOTE: Keep the SNMP port enabled while you use the machine on the TCP/IP network.

Initially, activate the port.

1. Connect the machine to the network.
2. Press the <Log In/Out> button on the control panel, and then type the Key Operator login ID to enter the Key Operator mode.

NOTE: The passcode may also be required depending on the machine configuration.

3. Press the <Machine Status> button on the control panel, and then select the [Tools] tab on the screen.
4. Select [System Settings].
5. Select [Connectivity & Network Setup].
6. Select [Port Settings].
7. Select [Receive E-mail] and then [Change Settings].
8. Select [Port Status] and then [Change Settings].
9. Select [Enabled] and then [Save].
10. On the [Port Settings] screen, select [Send E-mail] and then [Change Settings].
11. Select [Port Status] and then [Change Settings].
12. Select [Enabled] and then [Save].

Next, establish TCP/IP.

1. In [Connectivity & Network Setup], select [Protocol Settings].
2. Under [TCP/IP - Operation Mode], select [IPv4 Mode], [IPv6 Mode], or [Dual Stack].

When [IPv4 Mode] or [Dual Stack] is selected

3. Select [IP Address Resolution], and then [Change Settings].
4. Select a method for establishing an IP address from [DHCP], [BOOTP], [RARP], [DHCP/Autonet], and [STATIC], and then select [Save].

NOTE: Use the DHCP server together with the Windows Internet Name Server (WINS) server.

If you selected [STATIC] in step 4, then proceed to step 5 to configure the protocol settings. Otherwise, proceed to step 11.

5. Select [IPv4 - IP Address], and then [Change Settings].
6. Use the keypad on the screen to enter the IP Address for the machine in the format "xxx.xxx.xxx.xxx". When you have finished entering all values, select [Save].
7. Select [IPv4 – Subnet Mask], and then [Change Settings].
8. Using the same method as in step 6, enter the Subnet Mask.
9. Select [IPv4 – Gateway Address], and then [Change Settings].

NOTE: If you do not wish to set the gateway address, leave this field blank.

10. Using the same method as in step 6, enter the Gateway Address.

11. Select [IPv4 – IP Filter], and then [Change Settings].

12. Select [Enabled] to filter access to the machine.

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

13. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

When [IPv6 Mode] or [Dual Stack] is selected

3. Set [IPv6 Address Manual Configuration].

NOTE: Select [Enabled] when the machine is connected to a network on which IPv6 stateless address autoconfiguration is disabled, or when you want to set a static IPv6 address.

If you selected [Enabled] in step 3, proceed to step 4. Otherwise, proceed to step 10.

4. Select [IPv6 – Manual IP Address Setup], and then [Change Settings].
5. Use the keypad on the screen to enter the IP Address for the machine in the format "xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx". Select [Save].
6. Select [Manually Configured IPv6 Prefix], and then [Change Settings].
7. Set the IP address prefix, and then select [Save].
8. Select [IPv6 – Manual Gateway Setup], and then [Change Settings].
9. Using the same method as in step 5, set the gateway address.
10. Select [IPv6 – IP Filter], and then select [Enabled] or [Disabled].

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not to be allowed to access the machine.

- 11.** When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

Finally, set the other items required for the Internet Fax feature.

- 1.** In [Connectivity & Network Setup].
- 2.** Select the following items, and then [Change Settings].
 - [Machine's E-mail Address/Host Name]
 - E-mail Address
 - Machine Name
 - Host Name
 - Domain Name
 - [Outgoing/Incoming E-mail Settings] > [POP3 Server Settings]: when receiving E-mail via POP3
 - POP3 Server Name/Address
 - POP3 Server Port Number
 - POP3 Server Check Interval
 - POP3 Server Login Name
 - POP3 Server Password
 - POP3 Password Encryption
 - [Outgoing/Incoming E-mail Settings] > [SMTP Server Settings]: when sending or receiving E-mail via SMTP
 - SMTP Server Name/Address
 - SMTP Server Port Number
 - E-mail Send Authentication
 - SMTP AUTH Login Name
 - SMTP AUTH Password
 - [Outgoing/Incoming E-mail Settings] > [Domain Filtering]: if required
 - Domain Filtering
 - Domain 1 to 50
 - [Other Settings]
 - E-mail Receive Protocol
 - Output Destination for E-mail
 - [Security Settings] > [S/MIME Settings]
 - Device Certificate - S/MIME
 - S/MIME Communication
 - Receive Untrusted E-mail
 - Receive Untrusted Internet Fax

- Message Digest Algorithm
- Message Encryption Method
- Digital Signature - Outgoing E-mail
- Signature - Outgoing Internet Fax
- Certificate Auto Store

3. Select [Save].

Test Internet Fax

To make sure that Internet Fax has been set up successfully, perform the following steps:

Sending:

- 1.** Load a document.
- 2.** Select [Internet Fax] on the <All Services> screen.
- 3.** Select the required features for the job.
- 4.** Enter the E-mail address of the recipient.
- 5.** Press the <Start> button.

The document will be scanned and converted to TIFF format. Then it will be sent as an E-mail attachment.

Receiving:

When the machine receives an Internet Fax, printing starts automatically.

15 Server Fax

This chapter explains how to set up the Server Fax feature of the machine. The following information is provided.

Server Fax Overview – page 157

Information Checklist – page 157

Server Fax Environments – page 158

Server Fax Installation – page 158

Installation Procedure – page 158

Network Communication Setup – page 158

Test Server Fax transmission – page 162

Server Fax Overview

If your machine is installed with both the optional scanner kit and the optional server fax kit, you can use the Server Fax feature that sends and receives image data through a Server Fax server.

NOTE: The Server Fax feature cannot be used concurrently with the Fax feature or the Internet Fax feature. While the Fax Server feature is enabled, the Fax feature is detected as "not installed" even if the fax feature is supported on the machine. During that time, therefore, fax transmission and reception are disabled and printed reports show that the machine does not support the Fax feature.

Information Checklist

Before enabling this feature, make sure that the following items are available or have been performed.

Item	By
An existing operational network utilizing TCP/IP is required. These procedures are not designed to install a network.	Customer
Obtain and record the following information: <ul style="list-style-type: none">• IP address• Gateway address• Subnet mask (for IPv4) / Prefix (for IPv6)• Host name Refer to the Glossary for additional information about the Gateway Address and Subnet mask.	Customer
Test the machine to make sure that it is installed fully and functioning correctly.	Customer

Item	By
Install Server Fax Kit and enable the Server Fax feature.	Customer

Server Fax Environments

System Requirements

The following are required to use the Server Fax feature.

- Network Scanning Kit
- Server Fax Kit
- Machine connection to a network using TCP/IP
- A Server Fax server installed on the same network

Server Fax Installation

This section describes how to enable the Server Fax feature.

Installation Procedure

To use the Server Fax feature, configure the following for the machine.

Network Communication Setup

1. Set the IP address.

Server Fax Configuration

1. Switch to the Server Fax feature.
2. Configure the Server Fax settings.

Test Server Fax Transmission

Submit a Server Fax job to make sure that the Server Fax feature has been configured correctly.

Network Communication Setup

The following describes how to establish TCP/IP.

1. Press the <Log In/Out> button on the control panel, and then type the Key Operator login ID to enter the Key Operator mode.

NOTE: The passcode may also be required depending on the machine configuration.

2. Press the <Machine Status> button on the control panel, and then select the [Tools] tab on the screen.
3. Select [Connectivity & Network Setup].
4. Select [Protocol Settings].
5. Under [TCP/IP - IP Mode], select [IPv4 Mode], [IPv6 Mode] or [Dual Stack].

When [IPv4 Mode] or [Dual Stack] is selected

6. Select [IP Address Resolution], and then [Change Settings].
7. Select a method for establishing an IP address from [DHCP], [BOOTP], [RARP], [DHCP/Autonet], and [STATIC], and then select [Save].

NOTE: Use the DHCP server together with the Windows Internet Name Server (WINS) server.

If you selected [STATIC] in step 7, then proceed to step 8 to configure the protocol settings. Otherwise, proceed to step 14.

8. Select [IPv4 - IP Address], and then [Change Settings].
9. Use the keypad on the screen to enter the IP Address for the machine in the format "xxx.xxx.xxx.xxx". When you have finished entering all values, select [Save].
10. Select [IPv4 – Subnet Mask], and then [Change Settings].
11. Using the same method as in step 9, enter the Subnet Mask.
12. Select [IPv4 – Gateway Address], and then [Change Settings].
13. Using the same method as in step 9, enter the Gateway Address.
14. Select [IPv4 – IP Filter], and then [Change Settings].
15. Select [Enabled] to filter access to the machine.

NOTE: If you do not wish to set the gateway address, leave this field blank.

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

16. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

When [IPv6 Mode] or [Dual Stack] is selected

6. Set [IPv6 Address Manual Configuration].

NOTE: Select [Enabled] when the machine is connected to a network on which IPv6 stateless address autoconfiguration is disabled, or when you want to set a static IPv6 address.

If you selected [Enabled] in step 6, proceed to step 7. Otherwise, proceed to step 13.

7. Select [IPv6 – Manual IP Address Setup], and then [Change Settings].
8. Use the keypad on the screen to enter the IP Address for the machine in the format “xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx”. Select [Save].
9. Select [Manually Configured IPv6 Prefix], and then [Change Settings].
10. Set the IP address prefix, and then select [Save].
11. Select [IPv6 – Manual Gateway Setup], and then [Change Settings].
12. Using the same method as in step 8, set the gateway address.
13. Select [IPv6 – IP Filter], and then select [Enabled] or [Disabled].

NOTE: If you do not wish to use the IP filter feature, select [Disabled].

NOTE: Use CentreWare Internet Services to register the IP addresses which are not allowed to access the machine.

14. When you have finished establishing TCP/IP, select [Close] on the [Protocol Settings] screen.

Server Fax Configuration

The following describes how to enable the Server Fax feature. In this procedure, CentreWare Internet Services is used as an example to switch to the Server Fax feature.

NOTE: For information on how to use CentreWare Internet Services, refer to *CentreWare Internet Services on page 47*.

NOTE: You can switch to the Server Fax feature also on the machine's control panel.

1. Start a web browser on a computer.
2. In the URL field, enter “http://” followed by the Internet address of the machine. Then press the <Enter> key on the keyboard.

NOTE: If you are to enter the IP address, use one of the following formats depending on your machine configuration. The IPv6 format is supported on Windows Vista only. An IPv6 address needs to be enclosed in square brackets.

(For IPv4) http://xxx.xxx.xxx.xxx

(For IPv6) http://[xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx]

NOTE: If a port number is set, append it to the Internet address as follows. In the following example, the port number is 80. The IPv6 format is supported on Windows Vista only. An IPv6 address needs to be enclosed in square brackets.

(For IPv4) http://xxx.xxx.xxx.xxx:80

(For IPv6) http://[xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx]:80

3. On CentreWare Internet Services, click the [Properties] tab.
4. Under [Services], select [Fax].

5. Click [Fax Settings], and then under [Fax Service], select [Scan to Fax Server].
6. Click the [Apply] button.
7. On the right frame of the screen, click [Reboot Machine] to reflect the setting.

The following describes how to configure the repository settings. The repository settings can be configured only on CentreWare Internet Services.

8. On CentreWare Internet Services, click the [Properties] tab.
9. Click the [Services] folder, then the [Fax] folder.
10. Under [Fax], click [Defaults].
11. On the [General] screen, set [Job Log] and [Confirmation Sheet].
12. Click [Apply] to reflect the settings.
13. On the tree in the left frame, click [Fax Repository setup].
14. On the right frame, set the items under [Fax Destination].
15. Select a protocol.

NOTE: When [FTP] or [SMB] is selected, faxes will be sent to the destination specified under [Fax Destination]. When [SMTP] is selected, faxes will be sent to the destination specified in the E-mail settings. For more details on this setting, refer to the CentreWare Internet Services help.

- When [FTP] or [SMB] is selected

Set the repository server that is to be used for the Server Fax feature.

- IP Address/Host Name & Port (If the port number is blank or set to “0”, the default port number (FTP:21 or SMB:139) will be used.)

NOTE: The IP address must be in IPv4 format.

- Share (SMB only)
- Document path
- Login name
- Password
- Retype password

- When [SMTP] is selected

The SMTP server settings conform to the E-mail settings. For details on the SMTP server settings, refer to *Scan to E-mail Setup on page 138*.

The following settings are additionally required for the SMTP server.

- Domain name (The IPv6 format is not supported.)
- E-mail address display format

16. Click [Apply] to reflect the settings.

Test Server Fax transmission

To make sure that Server Fax has been set up correctly, perform the following steps:

1. Load a document.
2. Make sure that the Server Fax feature is enabled.
3. Select [Fax] on the <All Services> screen.
4. Select the required features for the job.
5. Specify a destination.
6. Press the <Start> button.

16 Security

This chapter describes how to configure the security features for the machine.

The following information is provided in this chapter:

- Security Features Overview – page 163
- Securing HTTP Communication with Encryption – page 165
- Setting E-mail Encryption/Digital Signature – page 167
- Setting PDF/XPS Signature – page 170
- Click [Apply].Configuring Xerox Secure Access (Authentication) – page 171

NOTE: Some of the features described in this chapter are optional, and may not apply to your machine configuration.

Security Features Overview

Network Communication Security

The machine provides the security feature that encrypts the data to be transmitted between the machine and client computers.

Securing HTTP Communication from a Client to the Machine (SSL/TLS Server)

The machine supports the following ports to connect to the HTTP server: SOAP port, Internet Services (HTTP) port, IPP port, and WebDAV port.

The machine supports the SSL/TLS protocol to encrypt the data to be transmitted from a client to the machine.

To register an SSL/TLS server certificate, import an existing certificate, or create a new certificate on CentreWare Internet Services.

NOTE: By securing HTTP communication with encryption, the data transmitted using IPP can be encrypted (SSL-encrypted communication).

Securing HTTP Communication from the Machine to a Remote Server (SSL/TLS Client)

The machine supports the SSL/TLS protocol to secure HTTP communication from the machine to a remote server.

In general, no certificate setting is required. Only when a remote server requires SSL client authentication, an SSL/TLS client certificate needs to be registered in the machine through CentreWare Internet Services.

To verify a remote server by using the server-certificate verification feature, the root SSL/TLS server certificate needs to be registered into the machine through CentreWare Internet Services.

Digital Signature/Encryption of E-mails

The machine supports S/MIME for the Digital Signature and Encryption features of e-mails. To enable S/MIME on the machine, an S/MIME certificate needs to be registered into the machine through CentreWare Internet Services.

To encrypt e-mail data, get the self-signed or device certificate of the remote server.

Scan File Security

Encryption/Digital Signature for PDF/XPS Documents

The machine provides the Encryption feature that password-protects PDF/XPS documents, and the Digital Signature feature that attaches digital signatures to PDF/XPS files.

NOTE: XPS stands for XML Paper Specification.

To use the Digital Signature feature, a device certificate is required. Use CentreWare Internet Services to register a device certificate.

Securing HTTP Communication with Encryption

Installation Overview

Use the following steps to secure HTTP communication with encryption.

Configuration of the Machine

Use CentreWare Internet Services to register a certificate into the machine. By factory default, no certificate is registered in the machine. If necessary, register an SSL server certificate.

There are the following two methods to register a certificate in the machine:

- Creating a self-signed certificate for the machine, and then enabling HTTPS
- Enabling HTTPS, and then importing an existing certificate into the machine

For the detailed settings, refer to the following section.

Configuration of a Computer

In the [Address] box of a web browser, specify an address beginning with "https", rather than "http", in one of the following formats.

- IP address formats:
(For IPv4) https://xxx.xxx.xxx.xxx/
(For IPv6) https://[xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx]/

NOTE: The IPv6 format is supported on Windows Vista only. An IPv6 address needs to be enclosed in square brackets.

- Internet address format:
https://myhost.example.com/

To encrypt data that uses IPP, specify an address beginning with "https", rather than "http", when adding the machine using [Add Printer]. For more details, refer to the manual in the CD-ROM of the Driver CD Kit.

For the SOAP and WebDAV ports, no setting is required.

Configuration of the Machine

The following describes how to create a machine's self-signed certificate (for SSL server) and then enable SSL/TLS communication.

NOTE: For information on how to import an existing certificate, refer to the CentreWare Internet Services online help.

NOTE: A certificate cannot be imported into the machine if the same certificate has already been registered in either [Local Device] or [Others]. In that case, delete the existing certificate, and then import the new certificate.

NOTE: When performing SSL communication using a self-signed certificate created on the machine, or using a certificate written using the UTF-8 character code, the following will occur:

- On Internet Explorer on Windows 98SE or earlier, the information of [Issuer] and [Issued To] written in the certificate will not be displayed correctly.
- On Mac OS X 10.2 or later, connection to SSL will not be established on Internet Explorer.

These problems occur because the above operating systems do not identify the UTF-8 character code. When you use any of the above operating systems, therefore, use Netscape 7 as a web browser to avoid the problem.

Creating a Self-Signed Certificate

1. Access CentreWare Internet Services.

NOTE: For information on how to access CentreWare Internet Services, refer to *CentreWare Internet Services on page 47*.

2. Click the [Properties] tab.
3. Expand the [Security] folder, and then click [Machine Digital Certificate Management].
4. On the right page, click [Create new Self Signed Certificate].
5. Set [Public Key Size] and [Issuer].
6. Click the [Apply] button.
7. Refresh the web browser.

Enabling and Setting SSL/TLS

1. On the [Properties] page, expand the [Security] folder.
2. Click [SSL/TLS Settings].
3. Under [HTTP - SSL/TLS Communication], select the [Enabled] check box.
4. Set [HTTP - SSL/TLS Communication Port Number].

NOTE: Do not use the port numbers assigned to the other ports.

5. Click [Apply].
6. You will be prompted to reboot the machine. Click [Reboot Machine] to reflect the settings.

Setting E-mail Encryption/Digital Signature

Installation Overview

Use the following steps to set the Encryption and Digital Signature features of e-mails.

Configuration of the Machine

Import a certificate into the machine and enable S/MIME communication on CentreWare Internet Services. By factory default, no certificate is registered in the machine.

Before you register a certificate, the following configuration is required: *Securing HTTP Communication with Encryption on page 165.*

Configuration of a Computer

Prepare a certificate for email encryption/digital signature.

Configuration of the Machine

To configure the email encryption and digital signature settings, first secure HTTP communication, and then import a certificate to the machine and enable S/MIME.

NOTE: For information on the settings for securing HTTP communication, refer to *Securing HTTP Communication with Encryption on page 165.*

Importing a Certificate into the Machine

1. On CentreWare Internet Services, click the [Properties] tab.

NOTE: For information on how to use CentreWare Internet Services, refer to *CentreWare Internet Services on page 47.*

2. Under [Description], make sure that an e-mail address is set in [Machine's E-mail Address].
3. Expand the [Security] folder, and then click [Machine Digital Certificate Management].
4. Click [Upload Signed Certificate].
5. Enter the password into [Password] and [Re-enter Password].
6. Enter the name of the file to be imported. Use the [Browse] button as necessary.

NOTE: A certificate cannot be imported into the machine if the same certificate has already been registered in either [Local Device] or [Others]. In that case, delete the existing certificate, and then import the new certificate.

7. Click [Import]. When prompted, enter your user ID and passcode, and then click [OK].

NOTE: The factory-default user name and passcode are "11111" and "x-admin" respectively.

8. Refresh the web browser.

Specifying the Certificate

1. On the [Properties] page, expand the [Security] folder.
2. Click [Certificate Management].
3. Set [Category] to [Local Device], and [Certificate Purpose] to [S/MIME].
4. Click [Display the list].
5. Select the certificate from the list.
6. Click [Certificate Details], and then click [Use this Certificate].

NOTE: If the certificate does not contain the e-mail address of the machine, the error message "Your request was not processed" will appear. Import and select a certificate that the e-mail address of the machine is written in.

7. Click [Reboot Machine].

Enabling S/MIME Communication

1. On the [Properties] page, expand the [Security] folder.
2. Click [SSL/TLS Settings].
3. Under [S/MIME Communication], select the [Enabled] check box.
4. Click [Apply].
5. You will be prompted to reboot the machine. Click [Reboot Machine] to reflect the settings.

Configuring the S/MIME Settings

1. On the [Properties] page, expand the [Security] folder.
2. Click [S/MIME Settings].
3. Set [Message Digest Algorithm], [Message Encryption Method], [Certificate Auto Store], [Receive Untrusted E-mail], and [Digital Signature - Outgoing E-mail].
4. Click [Apply].

Configuration of a Computer

The following describes how to configure a computer.

To send scanned data from the machine to a computer by S/MIME-encrypted e-mail

The personal certificate (including the root certificate) for the destination e-mail address needs to be registered in the machine.

NOTE: For information on how to import a certificate, refer to the CentreWare Internet Services online help.

To send e-mail attached with S/MIME digital signature from the machine to a computer

No settings are required on the destination computer.

To send S/MIME-encrypted e-mail from a computer to the machine using the E-mail Printing feature

The machine's S/MIME certificate needs to be registered in the computer using one of the following ways.

- Set [Digital Signature - Outgoing E-mail] on the machine, and send e-mail attached with an S/MIME digital signature from the machine to the computer.
- Export the machine's S/MIME certificate to the computer using CentreWare Internet Services, and register the S/MIME certificate into the certificate store of the e-mail application on the computer.

NOTE: For information on how to export the machine's certificate, refer to the CentreWare Internet Services online help.

NOTE: For information on how to register the machine's certificate into an e-mail application, refer to the manuals provided with the e-mail application.

To send e-mail attached with an S/MIME digital signature from a computer to the machine

The following items need to be registered in the machine:

- The personal certificate of the sender's e-mail address
- The intermediate certificate authority certificate for the personal certificate
- The root certificate

NOTE: For information on how to import the certificates, refer to the CentreWare Internet Services online help.

Supported e-mail applications

For e-mail transmission/reception, the machine supports the following e-mail applications installed on computers:

- Outlook 2000/2002/2003
- Outlook Express 6
- Netscape 7.x

Setting PDF/XPS Signature

Installation Overview

Use the following procedure to attach a PDF/XPS signature to a PDF/XPS document.

NOTE: XPS stands for XML Paper Specification.

Configuration of the Machine

Import a certificate into the machine and configure the PDF/XPS signature settings on CentreWare Internet Services. By factory default, no certificate is registered in the machine.

Before you register a certificate, the following configuration is required: *Securing HTTP Communication with Encryption on page 165.*

Configuration of a Computer

Make sure that the root certificate for the scan file signature certificate is registered in the destination computer.

Configuration of the Machine

To configure the PDF/XPS signature settings, first secure HTTP communication, and then import a certificate into the machine and use it as a certificate for scan file signature.

NOTE: For information on the settings for securing HTTP communication, refer to *Securing HTTP Communication with Encryption on page 165.*

NOTE: For information on how to use CentreWare Internet Services, refer to *CentreWare Internet Services on page 47.*

Importing a Certificate into the Machine

1. On CentreWare Internet Services, click the [Properties] tab.
2. Under [Description], make sure that [Machine's E-mail Address] is set.
3. Expand the [Security] folder, and then click [Machine Digital Certificate Management].
4. Click [Upload Signed Certificate].
5. Enter the password into [Password] and [Re-enter Password].
6. Enter the name of the file to be imported. Use the [Browse] button as necessary.

NOTE: A certificate cannot be imported into the machine if the same certificate has already been registered in either [Local Device] or [Others]. In that case, delete the existing certificate, and then import the new certificate.

7. Click [Import]. When prompted, enter your user ID and passcode, and then click [OK].

NOTE: The factory-default user name and passcode are "11111" and "x-admin" respectively.

8. Refresh the web browser.

Specifying the Certificate

1. On the [Properties] page, expand the [Security] folder.
2. Click [Certificate Management].
3. Set [Category] to [Local Device], and [Certificate Purpose] to [Scan File].
4. Click [Display the list].
5. Select the certificate from the list.
6. Click [Certificate Details], and then click [Use this Certificate].
7. Click [Reboot Machine].

Configuring PDF/XPS Signature Settings

1. Expand the [Security] folder, and then click [PDF/XPS Security Settings].
2. Set [PDF Signature] and [XPS Signature].
3. Click [Apply].

Configuring Xerox Secure Access (Authentication)

Xerox Secure Access enables customers to leverage Xerox Partner Solutions to provide user authentication with an optional card reader. Users can access the features available at the device once they have been authenticated.

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Secure Access and Accounting

Secure Access can be enabled with Network Accounting or the Xerox Standard Accounting feature for accounting purposes.

To configure Xerox Secure Access with Network Accounting, refer to the **Configuring Network authentication (by a remote Accounting server)** topic in the Appendix of this Guide.

To configure Xerox Secure Access with Xerox Standard Accounting, refer to the **Optional** information in the Information Checklist below, then refer to the Xerox Standard Accounting in the Appendix of this Guide.

NOTE: Secure Access cannot be enabled at the same time as Foreign Device Interface.

Information Checklist

1. Ensure that the device is fully functional on the network. TCP/IP and HTTP protocols must be configured so that Internet Services can be accessed.
2. Ensure that the Xerox Partner authentication solution (Secure Access Server, Controller, and Card Reader) is installed and communicating with the multifunction device. Follow the installation instructions from the manufacturer of the authentication solution to correctly set the devices up.
3. Ensure that SSL (Secure Sockets Layer) is configured on the multifunction device. The Xerox Partner authentication solution communicates with the multifunction device via HTTPS.
4. **(Optional)** Ensure that Network Accounting is configured if you want the multifunction device to send user account information to a Network Accounting server. In Internet Services (the web pages running on the multifunction device) use your web browser to enter the multifunction device's IP address, then click the **Properties** tab, then click the **Security** folder, click **Authentication Configuration**, and select Xerox Secure Access for **Login Type**, matched to Network Accounting for **Accounting Type**. For use with Xerox Standard Accounting, you select Xerox Secure Access for Login Type, then select Xerox Standard Accounting for Accounting Type. For instructions on setting up Xerox Standard Accounting, refer to the **Xerox Standard Accounting** in the Appendix of this Guide. For instructions on setting up your Network Accounting server, refer to the instructions that came with your accounting package, as well as the **Configuring Network authentication (by a remote Accounting server)** topic in the Appendix of this Guide.

You may also need another Authentication Server to communicate with the Secure Access Server providing that server with user credentialing information. A second Authentication Server may be necessary for web User Interface Authentication, if this feature is additionally desired.

Configuring Xerox Secure Access to work with Remote Authentication

At Your Workstation:

1. Open your Web browser and enter the TCP/IP address of the machine in the Address or Location field, then select [Enter].
2. Click the [Properties] tab.
3. Select the [Security] folder, then the [Authentication Configuration] link. The Properties tab refreshes and the Authentication Configuration > Step 1 of 2 area appears.
4. In the Authentication Configuration > Step 1 of 2 area:
 - a) Select [Xerox Secure Access] from the Login Type drop-down list.
 - b) Select the [Enable] box for each service that you wish to restrict access to. For explanations of each service, select the [Help] button.

NOTE: If a Guest User box is available and configurable, consider whether it is advisable in your network environment to allow simple password, guest access to this restricted service device. The default setting is Off.

- c) Do not place a checkmark in the [Non-account Print] box if you wish to enable people without accounts to continue to print.
 - d) Select [Apply], then reboot the device following the prompt.
 - e) Select [Next].
The Properties tab refreshes and the Authentication Configuration > Step 2 of 2 area appears.
5. In the Authentication Configuration > Step 2 of 2 area, on the Authentication System line, select [Configure].
The Properties tab refreshes and the Authentication System area appears.
6. In the Authentication System area:
 - a) Settings drop-down list box, select [Authentication Agent].
 - b) Select [Apply], then reboot the device following the prompt.

Configure Remote Authentication for Kerberos (Windows 2000)

At your Workstation:

1. With the Authentication Configuration web page still running, click Configure next to the server you wish to use for Authentication. If not still running, perform steps 2 and 3 below.
2. If the web page is not still running, open your Web browser and enter the TCP/IP address of the machine in the Address or Location field. Press Enter.
3. Click the Properties tab. Note that (as of February 2007) you can either return to the Security folder and the Authentication Configuration hot link (discussed on the previous page), or use the alternative path, stated below.
4. Select the Remote Authentication Server / Directory Service folder in the list of hot links, select Authentication System and pick Kerberos (Solaris) from the drop-down list. Click Apply.
5. Select Kerberos Server Settings.
6. Enter the IP Address of the Primary Server (Domain Controller running the Key Distribution Center service).
7. Enter the IP Address of the Secondary Server (Domain Controller), if necessary.
8. Enter details of the Windows 2000 Domain in the Realm Name box. For example: example.com.
9. Enter details for up to 4 alternate Domain Controllers and backups, if required.
10. Click Apply, and supply the Administrator User name and password if prompted.

Configure Remote Authentication for Kerberos (Solaris)

At Your Workstation:

1. With the Authentication Configuration web page still running, click **Configure** next to the server you wish to use for Authentication. If not still running, perform steps 2 and 3 below.
2. If the web page is not still running, open your Web browser and enter the TCP/IP address of the machine in the Address or Location field. Press Enter.
3. Click the Properties tab. Note that (as of February 2007) you can either return to the Security folder and the Authentication Configuration hot link (discussed on the previous page), or use the alternative path, stated below.
4. Select the Remote Authentication Server / Directory Service folder in the list of hot links, select Authentication System and pick Kerberos (Solaris) from the drop-down list. Click Apply.
5. Select Kerberos Server Settings.
6. Enter the IP Address of the Primary Server (the server running the Key Distribution Center service).
7. Enter the IP Address of the Secondary Server, if necessary.
8. Enter details for the Realm. For example (in upper case): EXAMPLE.COM.
9. Enter details for up to 4 alternate servers and backups, if required.
10. Click **Apply**, and supply the Administrator User name and password if prompted.

Enable Specific Xerox Secure Access Settings

- 1.** Open your Web browser and enter the TCP/IP address of the machine in the Address bar. Press Enter.
- 2.** Select the Properties tab.
- 3.** Select the Security folder.
- 4.** In the Security folder, select the Remote Authentication Servers folder.
- 5.** In the Remote Authentication Servers folder, select Xerox Secure Access Settings.
- 6.** In the Xerox Secure Access Settings area:
 - a)** Enter text in the Default Prompt and Default Title boxes to create the prompt and prompt title that will be displayed on the multifunction device's screen informing users how to authenticate themselves at the device.
Note: If the Title and Prompt have been configured on the Secure Access Server, then that information will override the information entered here.
 - b)** Select the Enable box for Local Login to allow users to log in locally at the device.
 - c)** Select the Enable box for Get Accounting Code to get user accounting data from a networked Accounting Server (if used).
 - d)** Click Apply, and provide the Administrator User name and password if prompted.

Add the Secure Access to the Server

1. On the Windows 2000 desktop, from the Start menu, select Settings, then Printers. On the Windows XP desktop, from Start, select Printers and Faxes. The Vista path is Start\Control Panel\Printer(s).
2. On Windows 2000 or XP, click Add a Printer.
3. When the "Add Printer Wizard" screen displays, click Next.
4. Select Create a new port and choose Secure Access Port from the Type drop-down menu. (The Secure Access Port becomes available when it is installed, as above). Click Next.
5. When prompted, enter the IP address of the printer.
6. Enter a name for the print queue (such as raw). If you selected the Standard TCP/IP port, you can accept the default name provided by Windows. Click Next.
7. You will be prompted for a print driver. Select Have Disk and browse to the location of your print driver.
8. Select the .INF file, then click Open.
9. When the "Install from Disk" screen displays, verify that the path and file name are correct and click OK.
10. Select the model that corresponds to your printer and click Next.
11. Enter a name for your Printer and select either [Yes] or [No] for making this printer your default Windows printer. Select Yes if you will be printing primarily to this printer from your Windows applications. Click Next.
12. If the Printer Sharing Screen displays, select "Do not share this printer," unless the Printer is directly connected to your workstation and you wish to Share it with other network users. Click Next.
13. Select Yes to print a test page. Click Next.
14. Click Finish.

Using Secure Access

1. Read the multifunction device's User Interface prompt to determine what needs to be done to be authenticated at the device. Authentication methods include swiping a card, placing a proximity card near the reader, or entering a user ID or PIN (personal identification number).
2. If the device requests further information such as accounting details, enter this information at the User Interface.
3. The device will confirm successful authentication allowing access to previously locked system features.
4. When finished using system features, press the [Clear All] button on the multifunction device's keypad to close your account.

17 Problem Solving

This chapter contains problem solving procedures and how to seek further assistance. For more information, refer to the following.

Problem Solving Procedure – page 179

SMB – page 180

NetWare – page 185

UNIX – page 189

TCP/IP – page 191

EtherTalk – page 195

Bonjour – page 197

CentreWare Internet Services – page 198

Scanning Services – page 199

E-mail Services – page 202

Internet/Intranet Connection – page 203

Problem Solving Procedure

This section enables you to identify the network-related machine problems. Use the following steps to identify and solve the problem.

1. Resolve any local copier or fax problems first. Do not attempt to resolve a network problem if the local copier and fax functions are not operating correctly.
2. Check that the machine has power and it is switched on.
3. Check that the network cable is connected to the machine.
4. Check that the network cable is connected to the workstation.
5. Check that the correct print driver for the machine is selected at the workstation.
6. Check that the software application being used to send print jobs is set up correctly.
7. If printing and faxing documents are not available from a workstation, re-install a print driver on the workstation.
8. Call the local Xerox Welcome Center, where a representative will assist in the diagnosis and solution of the problem.

SMB

This section explains the troubleshooting procedures and restrictions while using an SMB environment.

Troubleshooting

This section explains what to do when a problem occurs while using SMB. The possible causes, confirmation methods, and actions are as follows.

When the machine is not found from client computers

Cause	Confirmation Method	Action
The transport protocol is different between the client and the machine.	When selecting [Searching as another computer] ([Start] > [Find] > [Computer]) on the client, the machine can be found. When opening the network computer to search for the machine, it cannot be found.	Match the SMB transport protocol between the machine and each client.
The network (subnet) is invalid.	When selecting [Searching as another computer] ([Start] > [Find] > [Computer]) on the client, the machine can be found. When opening the network computer to search for the machine, it cannot be found.	Set up the machine and client computers in the same networks.
The host name specified for the machine is already defined for a different machine.	Check if the host name is duplicated in the SMB status information of the System Settings List.	Use CentreWare Internet Services to change the host name to a different name, or reset the machine settings to the initial values.
The function to search for computer names is not available in IPv6 environment.	Check if Windows Vista displays the machine in a list of networked computers.	Edit the file "hosts" saved in "C:\Windows\system32\driver\etc" to associate the computer name with the IPv6 address, and then type "\\computer name" in the Address bar on Explorer.

When the machine or other SMB machines are not found from client computers

Cause	Confirmation Method	Action
If the SMB [Auto Master Mode] is [On], there are limits on the number of machines that can retain the machine information. The number varies with the network environment.	The machine or other SMB machines cannot be found using the network computer icon.	Check the SMB [Auto Master Mode] setting. If set to [On], change the setting to [Off].

When printing fails

Cause	Confirmation Method	Action
The machine is processing a print request from another client. (The receiving buffer is set to non-spool mode).	Check that the machine has a print job in progress. (This indicates whether there are files ready to print, and displays any write error dialogs.	After the machine has processed the print request, send a print job or change the mode to the spool mode.
The number of sessions exceeds the maximum.	Check that the machine is processing simultaneous requests (such as print request or status inquiry request) from multiple clients. (This indicates remote clients unable to use the machine, and displays any write error dialogs.)	Wait for a while, and send a print request again.

When the document cannot be deleted from the printer window

Cause	Confirmation Method	Action
An attempt is made to delete all documents displayed in the printer window. (Only the System Administrator)	Check whether the attempt is made to delete the print job from the Printer menu in the printer window.	Delete the print job from the Document menu in the printer window.
The document owner is invalid.	Check whether the owner of the selected document matches the Windows log-in name.	Use the owner name of the document to log in to Windows, and then delete the document.
Service Pack 4.0 or later is not installed in the system. (In Windows NT 4.0)	Check the Service Pack version to be displayed when you start Windows NT 4.0.	Install Service Pack 4.0 or later.

Other

Problem	Action
Job history displays a message that the document name is undefined instead of the correct job name.	Change the [Receiving Buffer - SMB Spool] setting from [Memory] to [Hard Disk].

Restrictions

This section explains the restrictions that apply while using SMB.

Machine settings

- The IP address is a unique address administered system-wide. Consult with the system administrator when setting the necessary parameters.
- The subnet mask and gateway settings may also be required, depending on the networking environment. Consult with the system administrator when setting the necessary parameters.
- When a port status is enabled and there is insufficient memory, the port status may be disabled automatically. In this case, disable all unused ports and reallocate the memory.
- The [Receiving Buffer - SMB] memory allocation needs to be set in response to the operating environment. If the memory allocation is too small, it may prevent receiving messages.

Client settings

- The IP address is a unique address administered system-wide. Consult with the system administrator when setting the necessary parameters.

When the machine is switched off

The following actions take place when the machine is switched off.

- When [Receiving Buffer - SMB] is set to [Spool to Memory]:
All print data spooled in machine memory, including the data currently being printed, is deleted. There is no print data on the machine when the machine is subsequently switched on.

However, if the machine is switched off immediately after a print request, the print data may be stored on the client. In this case, the print request can be reissued when the machine is subsequently turned on, and the print data is printed on the machine in turn.
- When [Receiving Buffer - SMB] is set to [Spool to Hard Disk]:
All print data spooled on the machine hard disk, including the data currently being printed, is retained. A print request can be reissued when the machine is subsequently turned on, and the print data is printed on the machine in turn.

- When [Receiving Buffer - SMB] is set to [No Spooling]:

All print data in the receiving buffer, including the data currently being printed, is deleted. There is no print data on the machine when the machine is subsequently switched on.

However, if the machine is switched off immediately after a print request, the print data may be stored on the client. In this case, the print request can be reissued when the machine is subsequently turned on, and the print data is printed on the machine in turn.

When printing

- When [Receiving Buffer - SMB] is set to [Spool to Hard Disk] or [Spool to Memory]:

Print data cannot be received if the print data size exceeds the available capacity of the hard disk or memory allocation.

NOTE: If the print data exceeds the receiving buffer capacity, the client may retransmit the same print data. In this case, stop the client and make sure that the client does not transmit the print data.

- When [Receiving Buffer - SMB] is set to [No Spooling]:

Print requests cannot be received from a client if a print request from another client is being processed.

- When the client IP address or computer name is changed:

When the client IP address or computer name is changed, the machine cannot perform query processing and cancel processing. Turn the machine off and on with the receiving buffer empty of print data.

NOTE: Stopping printing or forced deleting of print data in the machine receiving buffer can be performed using the control panel.

- When the machine is offline:

If a client issues a print request when the machine is offline, the print data cannot be received, and a write error is generated and displayed in an error dialog box on the client.

- Deleting jobs:

On Windows NT 4.0, jobs can be deleted if Service Pack 4 or later is installed. Deleting a job while receiving print data generates a write error. In this case, the button to retry printing on the error dialog box is disabled.

Printing using an SMB environment

- On Windows NT 4.0, Windows 2000, Windows XP or Windows Vista, printing in an SMB environment is not available when Unicode support is active.
- On Windows XP or Windows Vista, the user name may not be correctly displayed when printing on an SMB port.
- On Windows Vista in IPv6 environment, the machine is not displayed in a list of networked computers.

Authentication using SMB

- When SMB authentication is performed using the assigned IP address or host name, authentication is successful if only the user name and passcode matches the authentication server, even if the domain name does not match.
- In IPv6 environment without DNS server, authentication using SMB is not available if a computer name is specified as the SMB server.

NetWare

This section explains what to do when problems occur while using NetWare. The causes, confirmation methods, and actions are as follows.

When printing fails

For setting and confirmation methods, refer to the NetWare online documentation.

Cause	Confirmation Method	Action
A network component does not conform to the automatic setting of the frame type.	Check that the data link port light is on in the network component connected to the machine. Then check that frame types of the file server are unified in the network.	Set the machine to the frame type specified for the file server to be connected.
A fault occurred on the network between the client and the machine.	Use NWADMIN to check whether the target printer object is viewed.	Replace the network cable between the client and the machine.
The user name or group name of the print job is not registered in the print queue.	Use NWADMIN or PCONSOLE to check whether the user name or group name of the job has been registered in the print queue.	Re-send the print job to a print queue in which the user name or group name has been registered correctly.
		Use NWADMIN or PCONSOLE to register a user name or group name of the job in the print queue.*
Print jobs cannot be sent to the print queue.	Use NWADMIN or PCONSOLE to check whether the Allow Users To Submit Print Jobs option is set to Yes.*	Use NWADMIN or PCONSOLE to set the Allow Users to Submit Print Jobs to Yes.*
The user name or group name of the job is not defined in the print server.	Use NWADMIN or PCONSOLE to check whether the user name or group name of the job is registered in the target print server.*	Re-send the print job to a print queue in which the user name or group name has been registered correctly.*
		Use NWADMIN or PCONSOLE to register the user name or group name of the job in the print server.*

Cause	Confirmation Method	Action
The print job is in a print queue that is not assigned to the machine.	Use NWADMIN or PCONSOLE to check whether the machine is assigned to the print queue.	Re-send the print job to the print queue assigned to the machine.*
		Use NWADMIN or PCONSOLE to assign the target queue to the machine.*
The data format of the print job does not match the print environment setting of the client.	—	If using Windows on the client, disable Ctrl-D.
The number of print queues assigned exceeds the maximum number that the machine can support.	Use NWADMIN or PCONSOLE to check whether the required print queue is assigned to the machine.*	Re-send the print job to the print queue assigned to the machine.*
No slave file server is specified (bindery service mode).	Use PCONSOLE to check whether a slave file server is registered.*	Use PCONSOLE to register a slave file server.*
Incorrect printer type.	Use PCONSOLE to check the printer type.*	Use PCONSOLE to specify [Remote Parallel, LPT1]. Then reboot the machine.*
The setting for the slave file server is incorrect (bindery mode).	Use PCONSOLE to check the setting.*	Use PCONSOLE to specify the correct setting.*
The actual number of the page of the print job is different from the page number set in the machine.	Use NWADMIN to check whether the starting paper number is the same as that of the print job.*	Use NWADMIN or PCONSOLE to match the [Starting paper] number with the paper number of the print job.*
The IPX checksum is set to an invalid level.	Use the Set command on the file server console to check whether the IPX checksum is set to level 2.	Enter the following command on the file server console to set the IPX checksum to level 0 or level 1. Set Enable IPX Checksum = x (x: 0 or 1)
The NCP packet signature is set to an invalid level.	Use the Set command on the file server console to check whether the NCP packet signature is set to level 3.	Enter the following command on the file server console to set the NCP packet signature to level 0, 1, or 2 and then restart the file server. set NCP Packet Signature Option = x (x: 0, 1, or 2)

Cause	Confirmation Method	Action
The default machine name is invalid.	Print the System Settings List, and then check that the 6 least significant digits of the Ethernet address are correct.	Specify the correct Ethernet address, or assign a name other than the default.
No directory tree name is specified.	Print the System Settings List, and then check that a tree name is specified.	Specify a tree name.
No context is specified.	Print the System Settings List, and then check that a context is specified.	Specify a context.
Another printer object has been connected.	Use NWADMIN to check that the object is correctly assigned to the required print server.*	Use PCL Print Driver CD-ROM or CentreWare Internet Services to specify the correct file server name, tree name, context name, and active mode.
The file server goes down.	Select [Network Neighborhood] of Windows to search for the file server.	Activate the file server.
A printer having the same machine name exists on the network.	Switch off the machine, and then use NWADMIN to check that the printer object is in the job standby status.	Use PCL Print Driver CD-ROM to specify another machine name.
The NetWare port is not activated.	Print the System Settings List, and then check that the port is activated.	Activate the NetWare port.
	Print the System Settings List. When using IPX/SPX, check that the network number remains set to 00000000 (NetWare server down). When using TCP/IP, check that the IP address remains set to 0.0.0.0 (fixed IP address not specified) or an address supply server (DHCP server down).	When using IPX/SPX, start the NetWare server. When using TCP/IP, set the fixed IP address or start the address supply server (DHCP).
Invalid printer configuration.	Use NWADMIN or PCONSOLE to check that the printer configuration is correct.*	Use NWADMIN or PCONSOLE to set the following items. Printer type: Parallel Port: LPT 1 Printer Location: Auto Load (Local).*

When a switch off/on message is displayed

Cause	Confirmation Method	Action
A fault occurred in the NetWare interface.	—	Switch the machine off and on.

When the required printing result is not obtained

Cause	Confirmation Method	Action
The specified print language of the print job is different from one specified in the machine.	Check the print language of the machine.	Specify the same print language of the print job as that of the machine.

When there is no notification of error

When there is no message displayed on the client which has sent print request, the possible causes, confirmation methods, and actions are as follows.

When there is no notification of printer error

Cause	Confirmation Method	Action
The user is not registered in the Notify list of the print server.	Use PCONSOLE to check whether the user name or group name of the job is registered.	Register the user name or group name of the job.

When there is no notification of the completion of the job

Cause	Confirmation Method	Action
When sending the print job from the client, the NOTIFY option is not specified.	When sending the print job, check whether the NOTIFY option has been specified.	When sending the print job, specify the NOTIFY option.
NetWareCASTOFF has been executed on the client.	—	Execute NetWareCASTON on the client.

UNIX

This section explains the troubleshooting procedures while using a UNIX environment.

Troubleshooting

This section explains what to do when a problem occurs while using UNIX. The possible causes, confirmation methods, and actions are as follows.

When printing fails

Cause	Confirmation Method	Action
The IP address is not correct.	Check whether the IP address of the machine is correct.	Specify the correct IP address for the machine.
A network error occurs on the network between the client and the machine.	Use the PING command to check the communication status.	Check the error.
The printer entry setting is not correctly defined on the client.	Check the printer entry setting on the client. Check the /etc/printcap file of the client or use the lpstat command to troubleshoot.	Define the correct printer entry setting.
The system is in offline.	Check if the online lamp is off.	Exit the pause or the machine setting mode, and then check if the online lamp comes on.
The print data size sent in one print command exceeds the buffer memory size (in spool mode).	Check the upper limit of the receiving data size, and then compare it with the size of print data to be sent as one job.	When the print data size exceeds the maximum receiving data size in one file, divide the file into files smaller than the maximum, and then re-send the print request.
		When the print data size exceeds the maximum receiving data size in multiple files, reduce the number of files to be printed at one time.
A fault occurred during print processing.	Check the LPD error message displayed on the control panel.	Switch the machine off and on.

Cause	Confirmation Method	Action
The specified transmission speed is different from the transmission speed of the network.	Check whether the transmission speed is specified correctly.	Specify the correct transmission speed.
The client and machine are in different rings connected via a bridge, and the source routing is inactivated.	Check whether the source routing is specified correctly.	Activate the source routing.
The data format of the print job does not match the print environment of the client (print data sent from the client contains TBCP).	—	Specify PSASC as the printer name.
The data format of the print job does not match the print environment of the client (print data sent from the client is in the binary notation).	—	Set the logical printer name to PSBIN to print a binary file in the PostScript language.
Print paper is out.	Check the paper refilling message on the control panel.	Load the paper into the paper tray. When changing the paper size, specify the new size, if required.
The selected transport protocol does not match the client.	Check the transport protocol selected from the control panel.	Select the transport protocol matching the client.

When the required printing result is not obtained

Cause	Confirmation Method	Action
The specified print language is different from the print language of the print data.	Check the specified print language and the print language of the print data.	Specify a print language matching that of the print data.

TCP/IP

This section explains the troubleshooting procedures and restrictions while using TCP/IP.

Troubleshooting

This section explains what to do when a problem occurs while using TCP/IP. The possible causes, confirmation methods, and actions are as follows.

When using Windows 95/Windows 98/Windows Me

When printing fails

Cause	Confirmation Method	Action
The machine is connected to a network that is not available to your computer.	Check whether a router or gateway is between the network connected to your computer and one connected to the machine.	Directly connect the machine to the network connected to your computer.
A fault occurred on the network between your computer and the machine; connection failed.	Check that printer disabled status (network error) is displayed.	Check the network fault.
An invalid IP address is specified for the machine.	Print disabled status (Network Error) is displayed. Select [Properties] from the [Printer] menu on the printer window, and also select [Port Settings] on the [Details] tab. Compare the IP addresses in the [FX TCP/IP DPU Port Setups] and the System Settings List.	Enter the correct IP address in the IP address item of the [FX TCP/IP DPU Port Setup] dialog box.
After a print request was sent from the computer, the machine was switched off, or a print request was sent to a machine that was not switched on.	Print disabled status (Network Error) is displayed. Check whether the machine is switched on.	Switch the machine on.
Print requests are sent from multiple computers to the machine at the same time.	Print disabled status (Network Error) is displayed.	None. Printing restarts automatically.

Cause	Confirmation Method	Action
Printing file cannot be spooled due to insufficient disk capacity of the computer.	Print disabled status (spool error) is displayed. Open [My Computer], and then right-click the disk (example: C drive) in which Windows 95/Windows 98/Windows Me is installed. Select [Properties] from the displayed menu, and then check the free space size.	After deleting unnecessary files to increase the free space available, select [Pause Printing] from the [Document] menu of the printer window to enable printing to restart.

When using Windows NT 4.0/Windows 2000/Windows XP/Windows Server 2003/Windows Vista

When printing fails

Cause	Confirmation Method	Action
The correct IP address is not specified.	Check whether the IP address of the machine is correct.	Specify the correct IP address for the machine.
When [Receiving Buffer - LPD] is set to [Spool to Memory], the size of print data sent in one print request exceeds the maximum size specified.	Check the maximum receiving data size on the touch screen of the machine, and then compare it with the size of print data to be sent as one request.	When the print data size exceeds the maximum size in one file, divide the file into smaller files than the maximum receiving data size, and then send the print request again.
		When the print data size exceeds the maximum size in multiple files, reduce the number of files to be printed at one time.
A fault occurred during print processing.	Check the error message on the touch screen.	Switch the machine off and on, and then retry printing.
The selected transport protocol does not conform with the client.	Check the selected transport protocol on the touch screen.	Select a transport protocol conforming with the client.
The print data format to be processed by the machine does not match the data format sent from the client.	—	Disable the output function of Ctrl-D.

When the required printing result is not obtained

Cause	Confirmation Method	Action
The specified print language is different from the print language of the print data.	Check the specified print language and the print language of the print data.	Specify a print language matching that of the print data.
The print driver that accompanies the machine is not being used (a third party print driver is being used).	Check whether the print driver that accompanies the machine is selected.	Select the print driver that accompanies the machine. If the print driver is not found, install and select it. If a third party print driver is used, you may have unexpected results.

When using Macintosh OS X**When printing fails**

Cause	Confirmation Method	Action
The LPD port is not active.	Check whether the LPD port has been activated.	Activate the port if printing on a machine detected using Bonjour.

Restrictions

This section explains the restrictions that apply while using TCP/IP.

Machine settings

- The IP address is a unique address administered system-wide. Consult with the system administrator when setting the necessary parameters.
- The subnet mask and gateway settings may also be required, depending on the networking environment. Consult with the system administrator when setting the necessary parameters.
- When a port status is enabled and there is insufficient memory, the port status may be disabled automatically. In this case, disable all unused ports and reallocate the memory.
- The [Receiving Buffer - LPD] memory allocation needs to be set in response to the operating environment. If the memory allocation is too small, it may prevent receiving messages.

Client settings

- The IP address is a unique address administered system-wide. Consult with the system administrator when setting the necessary parameters.

- Consult with the Network Information Service (NIS) administrator when setting up the network parameters (IP address and other parameters) from a host running NIS.

When the machine is switched off

The following actions take place when the machine is switched off.

- When [Receiving Buffer - LPD] is set to [Spool to Memory]:
All print data spooled in machine memory, including the data currently being printed, is deleted. There is no print data on the machine when the machine is subsequently switched on.
However, if the machine is switched off immediately after a print request, the print data may be stored on the client. In this case, the print request can be reissued when the machine is subsequently turned on, and the print data is printed on the machine in turn.
- When [Receiving Buffer - LPD] is set to [Spool to Hard Disk]:
All print data spooled on the machine hard disk, including the data currently being printed, is retained. A print request can be reissued when the machine is subsequently turned on, and the print data is printed on the machine in turn.
- When [Receiving Buffer - LPD] is set to [No Spooling]:
All print data in the receiving buffer, including the data currently being printed, is deleted. There is no print data on the machine when the machine is subsequently switched on.
However, if the machine is switched off immediately after a print request, the print data may be stored on the client. In this case, the print request can be reissued when the machine is subsequently turned on, and the print data is printed on the machine in turn.

When printing

- When [Receiving Buffer - LPD] is set to [Spool to Hard Disk] or [Spool to Memory]:
Print data cannot be received if the print data size exceeds the available capacity of the hard disk or memory allocation.

NOTE: If the print data exceeds the receiving buffer capacity, the client may retransmit the same print data. In this case, stop the client and make sure that the client does not transmit the print data.

- When [Receiving Buffer - LPD] is set to [No Spooling]:
Print requests cannot be received from a client if a print request from another client is being processed.
- When the client IP address or computer name is changed:
When the client IP address or computer name is changed, the machine cannot perform query processing and cancel processing. Turn the machine off and on with the receiving buffer empty of print data.

NOTE: Stopping printing or forced deleting of print data in the machine receiving buffer can be performed using the control panel.

EtherTalk

This section explains the troubleshooting procedures and restrictions while using EtherTalk.

Troubleshooting

This section explains what to do when a problem occurs while using EtherTalk. The possible causes, confirmation methods, and actions are as follows.

Problem	Cause	Action
A job was printed on a different machine than the assigned machine.	If there are multiple machines on the network with the same name, the machine names are changed automatically depending on the power-on timing of each machine. Print jobs intended to be printed on one machine are sent to another machine.	Change the machine names so that all machine names on the network are unique.
The machine cannot be accessed from a client.	The machine name, used by the client to recognize the machine, cannot be registered if the machine is turned on when not connected to the network.	Turn the machine on after connecting to the network. If the machine is turned on when not connected to the network, turn the machine off, connect to the network, and turn the machine on again.

Restrictions

This section explains the restrictions that apply while using EtherTalk.

Machine Name

The machine name recognized by the client cannot have duplicates on the network. If another machine on the network has the same machine name, the machine name is changed automatically when the machine starts.

Name Change Rules

The machine name is changed as follows:

- When the machine name is 31 characters or less in length
A numeral is appended to the end of the machine name. If another machine on the network still has the same name as the machine, the numeral is incremented.
- When the machine name is 32 characters in length
The last character in the machine name is replaced with a numeral. If another machine on the network still has the same name as the machine, the numeral is incremented.

If the [Protocol Settings] in the [Properties] tab of CentreWare Internet Services is accessed after the machine is initialized with a changed name, the old machine name is displayed. However, the changed machine name is registered on the network, and the client can access the machine using the new machine name. If the machine is turned off and on again after the machine name is changed, the machine attempts to start with the changed machine name. At this point, if there is another machine on the network with the same name, the machine name is changed following the rules above.

It is recommended that all machines on the network be setup with unique machine names.

Zone Name

The zone name can be set using the [Protocol Settings] in the [Properties] tab of CentreWare Internet Services. However, if the assigned zone name does not exist on the network connected to the machine, the zone name is changed to the default zone name. When setting the zone name, make sure that the zone name exists on the network connected to the machine.

Bonjour

This section explains some aspects of using Bonjour.

Restrictions

This section details the restrictions that apply while using Bonjour.

Bonjour operating environment

Bonjour can be used on Macintosh computers running Mac OS X 10.2 or later using the Printer Setup Utility or Safari. The Bonjour discovery function is enabled on the same subnet.

Machine Name

- If the machine name or host name settings are changed, print jobs may be printed on printers other than the specified printer.
- If there are multiple machines on the network with the same machine name or host name, a numeral is appended automatically to one of the names so that all names on the network are unique.
- If the machine name or host name is changed, there are restrictions on the number of characters and the type of characters that are valid for name registration. Therefore, it is recommended that the machine name and host name are not changed.

CentreWare Internet Services

This section explains the troubleshooting procedures while using CentreWare Internet Services.

Troubleshooting

This section explains what to do when a problem occurs while using CentreWare Internet Services. The possible causes, confirmation methods, and actions are as follows.

Problem	Confirmation Method	Action
Cannot access to CentreWare Internet Services.	Check if the power of the machine is switched on.	Switch the machine on.
	Print out the System Settings List to check if CentreWare Internet Services port is activated.	Activate the CentreWare Internet Services port.
	Check if the Internet address is correctly entered.	Check the Internet address. If Services cannot be accessed, enter the IP address to make the connection.
	Check if the proxy server being used.	Depending on the proxy server, connections might not be possible. Without using the proxy server, configure either the browser setting to "not using proxy server" or the address to be used to "not using proxy server".
The "please wait" message is displayed.	—	Wait for a while as instructed. If nothing happens, click the [Refresh] button. If this does not help, check that the machine is working correctly.
The [Refresh Status] button is not working.	Check if you are using the specified OS and browser.	Use the specified OS and browser.
Selecting menu in the left frame does not change the right frame connection.		
The screen display is distorted.	—	Change the window size of the browser.
The latest information is not displayed.	—	Click the [Refresh Status] button.

Problem	Confirmation Method	Action
Clicking the [Apply] button does not reflect the new settings.	Check if the entered value is correct.	Enter the correct value. If the entry is not valid, it will be automatically changed within the limit.
Clicking the [Apply] button will display messages like “the server has returned ineffective or unrecognizable response” or “no data”.	Check if the user ID and passcode are correct.	Enter the correct user ID and passcode.
		Reboot the machine.
Cannot delete the job.	—	Wait for a while and then click the [Refresh Status] button.

Scanning Services

This section explains the troubleshooting procedures while using scan functions.

Troubleshooting

This section explains what to do when a problem occurs while using scan functions. The possible causes, confirmation methods, and actions are as follows.

When SMB transmission to Windows Server 2003 fails

Cause	Confirmation Method	Action
The machine and Windows clock settings do not match as specified by the SMB signature.	SMB transmission fails even with a correct user name and password.	Set the machine and Windows clock settings so that they match.

Other

Problem	Action
On Windows Server 2003, Windows XP or Windows Vista, cannot perform SMB transfers for users without a password.	Change the network access settings as follows. 1. Boot Windows and select [Control Panels] > [Administrative Tools] > [Local Security Policy]. 2. Select [Security Settings] > [Local Policies] > [Security Options]. 3. Set [Accounts: Limit local account use of blank passwords to console logon only] to [Disabled].
Cannot perform SMB transfers using a DFS access path (\\domainname\sharename)	DFS access path specification is not supported. Specify a UNC format path (\\hostname\sharename).

Problem	Action
In IPv6 environment without a DNS server, scan data cannot be transferred using the Scan to PC (SMB) feature.	Scan data cannot be transferred if the name of a computer is specified as a server. Specify the IPv6 address for the SMB scan parameter.

Restrictions

This section explains the restrictions that apply while using scan functions.

NOTE: For information on the network scan driver and Mailbox Viewer 3 application, refer to the Readme file on the driver CD-ROM.

When retrieving a document from a mailbox

- If [Delete Document After Retrieval] is turned off, the same document can be accessed by many clients. If [Delete Document After Retrieval] is turned on, the document can only be accessed by 1 client. Documents stored or read by a client cannot be seen by other clients. In either case, documents can be added to an accessed mailbox.
- Documents retrieved using CentreWare Internet Services cannot be deleted using CentreWare Internet Services, regardless of the [Delete Document After Retrieval] setting.

Display screen

If a document containing many colors is retrieved and displayed on a system with display mode with fewer colors, the image will not be displayed using the correct colors. The display mode must display more colors than the image for correct reproduction.

Using a network scan driver and Mailbox Viewer 3 simultaneously

A single computer using a network scan driver and Mailbox Viewer 3 simultaneously cannot connect to the machine.

A maximum of 3 computers can retrieve a document from the machine simultaneously using either a network scan driver or Mailbox Viewer 3.

When polling from another fax machine

A scanned document is not transmitted when polling the machine from another fax machine.

Using TIFF files

TIFF files created using CentreWare Scan Services or Mailbox Viewer 3 are compressed using MMR, MH, JBIG, or JPEG compression method. Software that supports these compression methods is required to open TIFF files.

NOTE: Mailbox Viewer 3 cannot create TIFF files using the JBIG compression method.

Write capacity limit

The maximum write capacity for a single page is 297 × 432 mm. The largest standard size is A3 or 11 × 17 inch.

Number of stored document pages (mailbox)

The maximum number of document pages that can be written to a mailbox in a single write operation is 999 pages. The maximum number also changes in response to the size of the document and resolution.

Network access in an SMB environment

- On Windows NT 4.0, Windows 2000, Windows XP, Windows Server 2003 and Windows Vista, if the number of shared resources other than those of shared folders, such as printers, is 256 or more, the shared resources are displayed in the shared resources list.
- The list display of workgroup names, server names, shared names, and others on the network are not displayed in alphabetical order.
- In IPv6 environment, the Browse function for the Scan to PC (SMB) feature is not available.

E-mail Services

This section explains the troubleshooting procedures while using E-mail functions.

Troubleshooting

This section explains what to do when a problem occurs while using E-mail Print, Mail Notice Service, Internet Fax, or Scan to E-mail feature. The possible causes, confirmation methods, and actions are as follows.

Problem	Confirmation Method	Action
Cannot receive E-mail. (E-mail Print, Internet Fax)	Check if the E-mail address of the machine is set.	Set the E-mail address of the machine.
	Check if [Receive E-mail] is activated.	Activate [Receive E-mail].
	Check if the SMTP Server IP Address or POP3 Server IP Address is set correctly.	Set the SMTP Server IP Address or POP3 Server IP Address.
	Check if the POP3 Server Login Name or POP3 Server Password is set correctly.	Set the POP3 Server Login Name or POP3 Server Password.
	Use CentreWare Internet Services to check if [Enter Rejected Domain Names] is selected in [Domain Filtering] and your domain is included in the list of rejected domain names.	Set [Domain Filtering] to [Off]. Or remove your domain name from the list of rejected domain names.
	Check if your SMTP or POP3 server functions correctly.	Check your SMTP or POP3 server.

Problem	Confirmation Method	Action
Cannot send E-Mail (Mail Notice Service, Internet Fax, Scan to E-mail)	Check if the E-mail address of the machine is set.	Set the E-mail address of the machine.
	Check if [Mail Notice Service] is activated.	Activate [Mail Notice Service].
	Check if [Send E-mail] is activated.	Activate [Send E-mail].
	Check if the SMTP Server IP Address or POP3 Server IP Address is set correctly.	Set the SMTP Server IP Address or POP3 Server IP Address.
	Use CentreWare Internet Services to check if the Mail Notice settings are set correctly.	Set the Mail Notice settings.
	Use CentreWare Internet Services to check if the recipient mail addresses are set correctly.	Set the recipient mail addresses.
	Check if your SMTP or POP3 server functions correctly.	Check your SMTP or POP3 server.

Internet/Intranet Connection

This section explains the troubleshooting procedures and restrictions while using Internet and intranet connections.

Troubleshooting

This section explains what to do when a problem occurs while using Internet or intranet connections. The possible problems and actions are as follows.

When you cannot connect to the Internet/intranet

Problem	Action
Authentication service on a remote server is not supported on the machine.	Basic authentication only is supported on the machine. NTLM/digest is not supported. Change to authentication using SSL as security considerations require.
The remote cooperation service and the machine model options do not match.	If using remote services, purchase the corresponding product, model, or options as necessary.
The IP address is not set correctly.	Check the IP address setting. If the IP address is not set correctly, supply a fixed IP address, or use DHCP or Autonet to assign an IP address.

Problem	Action
The IP gateway address is not set correctly.	Enter the correct IP gateway address if connected to a proxy server or a web server through an IP gateway.
The subway mask is not set correctly.	Enter the correct subway mask that matches the operating environment.
The DNS server address is not set correctly.	Check the DNS server address.
The DNS server address cannot be resolved.	<p>Set the DNS server for resolving addresses.</p> <ul style="list-style-type: none"> • When using a proxy server: Enter the DNS server address for resolving the proxy server address. • When not using a proxy server: Enter the DNS server address for resolving the recipient addresses.
The address to bypass proxy server setting is incorrect.	<p>Check whether only the address to bypass proxy is specified. If the server is accessed using a direct IP address while specifying an address to bypass proxy in FQDN format, the registered server does not become an excluded object. Therefore, an IP address can be used as the bypass proxy address. Similarly, if the server is accessed using FQDN format while specifying a direct IP address for the bypass proxy address, the registered server does not become an excluded object. Therefore, an FDQN format can be used as the bypass proxy address.</p>
The connected server or proxy server are down.	Check that the server or proxy server you wish to connect to is operating normally.
The network drops out or is disconnected.	Check the network cable connections. A spanning tree environment is recommended to construct a strong environment against network interruptions.
Cannot communicate due to the load on the server application.	Wait a while and try again.
Nothing is displayed on the control panel but an error occurs.	Nothing is displayed on the control panel even when an error occurs during execution of background processes. Display the [Job Status] screen or print a job history report and check the results.
Cannot connect due to proxy server, firewall, or web server access restrictions.	<p>Check if any of the following access restrictions are set.</p> <ul style="list-style-type: none"> • Address (port) restrictions • SSL usage restrictions • User access restrictions (including access privileges) • Content blocking • Scheme restrictions (for example, HTTP disable) • Transfer data size restrictions • Used method restrictions (for example, POST disable) • HTTP header restrictions (for example, specific browsers) • Time restrictions (for example, time-limited access)

Problem	Action
A certificate is not registered for using the iFlow service.	The iFlow service cannot be used without certificate authentication. Obtain a certificate for the desired machine and register the certificate on the machine.

When you cannot connect to a web server

Problem	Action
The settings are not for using the proxy server.	In a proxy environment, the web server cannot be connected without the proxy server settings. Enter the settings for using the proxy server.
The settings are for using a proxy server in a non-proxy environment.	For environments where connecting via a proxy is not required, such as connecting to an intranet, the settings should not be set for using a proxy server.
The proxy server address is not set correctly.	When setting up a proxy server, the web server cannot be connected if the proxy server address is not set correctly. Enter the correct proxy server address.
The user name and/or password are entered incorrectly when proxy server authentication is set.	Register the user name and password on the machine to grant connection access to the proxy server.

Restrictions

This section explains the restrictions that apply while using Internet or intranet connections.

Internet/Intranet connections

Connection to the Internet or an intranet depends on various settings, including the destination web server, the used server application, proxy server, and firewall types.

When connecting to the Internet or an intranet using server application software, proxy, or firewall supplied by another company, the following conditions are required.

- Windows 2000, Windows XP, Windows Server 2003 or Windows Vista
- Conformance with the following conditions
 - RFC2616: Hypertext Transfer Protocol HTTP/1.1
(Normal connections, SSL connections, Proxy authentication)
 - RFC2617: HTTP Authentication: Basic and Digest Access Authentication
(Basic authentication support only, others are not supported)
 - RFC2817: Upgrading to TLS Within HTTP/1.1
 - RFC2818: HTTP Over TLS
- HTTP/HTTPS scheme compatibility
- GET/CONNECT/HOST method compatibility

18 Appendix

Configuring Network Authentication (by a remote Accounting server)

Network authentication uses the user information managed on a remote Accounting server to manage authentication (access) to available machine services.

Enable Network Authentication

To enable Network Authentication for use with this Device, at your networked workstation, perform the following steps:

1. Open your Web browser and enter the TCP/IP address of the machine in the Address or Location field. Press **Enter**.
2. Click the **Properties** tab.
3. Select the **Security** folder, then the **Authentication Configuration** hot link.
4. Select **Login to Remote Accounts** from the Login Type drop-down list, then **Network Accounting** from the Accounting Mode drop-down list.
5. Place a checkmark in the **Enable** box for each service that you wish to restrict access to. For explanations of each service, click the Help button.
6. Do not place a checkmark in the **Non-account Print** box if you wish to enable people without accounts to continue to print.
7. From the **Verify User Details** drop-down menu, select either Yes or No (keep logon records). The Yes selection will verify user information. When No (keep logon records) is selected, User ID and Account ID must be entered at the Device, but user information will not be checked. A logon record will be kept by the Device, however.
8. If a Guest User box is available and configurable, consider whether it is advisable in your network environment to allow simple password, guest access to this restricted service device. The default setting is Off.
9. If you wish to allow guest access, enter your guest password twice in the boxes provided.
10. Click **Apply** and enter the Administrator User name and password when prompted.
11. Click the **Reboot Machine** button, then **OK**, when prompted.
12. Refresh your web browser, then click on the **User Details Setup** link to set the Store User Details setting. Note that you can set either NVM or hard disk as the

destination for saved authentication information. User Details Setup also allows you to configure the characteristics of the login prompt for User Authentication.

Xerox Standard Accounting

Overview

When enabled, Xerox Standard Accounting (XSA) tracks the numbers of Copy, Print, Network Scanning, E-mail, Internet Fax and Embedded Fax jobs (when these features are installed on the machine), for each user. Usage limits can also be applied to users to restrict the total numbers of copy, print, fax and scan jobs that a user can perform. Administrators can print a report which contains all XSA data.

XSA is set up through CentreWare Internet Services, the machine's HTTP pages displayed on your web browser. Administrators must create accounts and specify limits before users are authorized to access the machine.

When XSA is set up, users must enter their account details at the machine to use the device. When they have finished their job, their XSA allocation is reduced by the number of prints, copies or scans performed. When XSA is enabled, users must enter their account details in the print driver to print documents from their workstations.

The XSA feature is mutually exclusive from any other accounting feature. If XSA is enabled at the device,

You cannot enable Foreign Device Interface, Auditron or Network Accounting.

Each device supports unique XSA User IDs and Group Accounts.

All user IDs must be assigned to one or more group accounts.

NOTE: The XSA settings and account data are stored in the machine. It is strongly recommended that you back up the settings and data regularly using the Cloning hot link available under the XSA folder of Internet Services as described in this section. Should the machine lose your XSA data and settings you can restore them from the backup file that you produced by the Cloning process.

Installation Checklist

Before starting the installation procedure, please ensure the following items are available or have been performed.

1. Ensure that your device is fully functioning on the network.
2. Ensure that the TCP/IP and HTTP protocols are configured on the device and fully functioning. This is required to access CentreWare Internet Services to configure Xerox Standard Accounting. The Internet Services function is accessed through the embedded HTTP server on the machine and allows System Administrators to configure XSA with a web browser.

To verify that the TCP/IP and HTTP protocols are correctly configured, print a Settings List.

Enable Xerox Standard Accounting (from Internet Services)

At your Workstation

1. Open your web browser and enter the TCP/IP address of the machine in the Address bar. Press <Enter>.
2. Click the [Properties] tab.
3. Click the [Accounting] folder, then select [Accounting Configuration].
4. Select [Xerox Standard Accounting] from the [Accounting Type] drop-down list.
5. Place a checkmark in the [Enabled] box for each service that you wish to restrict access to.
6. Click [Apply] .
7. Reboot the machine at the prompt.

Create a Group Account

1. On the [Properties] tab of Internet Services, expand the [Accounting] folder, and then the [Xerox Standard Accounting] folder.
2. Click the [Group Accounts] link to create a new group account.
3. In the Group Accounts Account ID box, enter an ID for the new group account (for example 001). The Group Account can be alphanumeric values up to a maximum of 32 characters. Group Account ID's must be unique.
4. Enter a name for the group account in the Account Name box (for example Xerox). The group name can be alphanumeric characters to a maximum of 32 characters. The Group Account name must be unique.
5. Click [Apply] . The account will now be available in the Group Accounts list. Note that you may have to refresh your browser, or click another link, and then click on Group Accounts again, to see the new group.

Create a User Account and Set Usage Limits

NOTE: At least one group account must be created before you create user accounts.

1. On the [Properties] tab of Internet Services, expand the [Accounting] folder, and then the [Xerox Standard Accounting] folder.
2. Click [Manage Accounting].
3. Click [Add New User].
4. Enter an ID for the user. The user ID can contain alphanumeric characters to a maximum of 32 characters (for example: A10). User ID's must be unique.

NOTE: Up to 9999 User ID's can be registered.

5. Enter the user name (for example Jane Smith). The user name can contain alphanumeric characters to a maximum of 32 characters. User names must be unique.
6. Specify the usage limits for this account in the User Limits boxes. The maximum value for each limit is 9999999.
7. Click the [Apply] button when you have finished setting the usage limits.

Maximum Usage Limits and Resetting Individual Usage Limits

The first time a user logs into the device after the user's group has reached the maximum usage limit, a message displays on the user interface. The message notifies the user that the group has reached the limit for the feature. All the users in the group will not be able to use the feature until their limit is reset.

If a user performs a copy job at the machine, and midway through the job the limit is exceeded, the job will not continue.

If a user performs a scan job at the machine, and midway through the job their limit is exceeded, the job will be cancelled.

If the user's limit is reached before a print job is completed, the machine will notify the user that the limit has been reached. The job will be deleted from the print queue. The job may run over due to sheets committed to the paper path.

NOTE: The system administrator has unlimited access to the machine.

To Reset User Limits (if necessary)

1. On the [Properties] tab of Internet Services, expand the [Accounting] folder, and then the [Xerox Standard Accounting] folder.
2. Click [Manage Accounting].
3. Place a checkmark in the box for the desired User ID.
4. Click [Limits & Access].
5. Check [Reset] boxes, and click [Apply].

Using XSA at the machine

When you enable XSA, users must enter a valid user name at the machine to access any services to which access restriction has been applied. Refer to Enable Xerox Standard Accounting in this section for the specific service restricting procedure.

At the Machine

1. Press the <All Services> button, if necessary, to display all the available service buttons.
2. Press any button representing a service to which restricted access has been applied.

NOTE: A lock icon may appear next to a restricted service.

3. When the “Enter a User ID” message displays on screen, enter your user ID and press <Enter>.

NOTE: If the user is a member of more than one Group Account, he or she will be asked to select the account that they wish to log into.

4. When the user is logged in, the selected service screen will be displayed. The user can now use that service, with usage tracked by XSA.
5. To logout, press the <Log In/Log Out> button. The screen will ask if you want to logout. Select [Logout] and you will be logged out, or after a few minutes of inactivity, the user will automatically be logged out.

Resetting Usage Data

At your Workstation

1. Open your web browser and enter the TCP/IP address of the machine in the Address or Location field. Press <Enter>.
2. Click the [Properties] tab.
3. Expand the [Accounting] folder, and then the [Xerox Standard Accounting] folder.
4. Click [Report and Reset].
5. To reset all usage data to zero, click the [Reset Usage Data] button.
6. Click [OK] to confirm.

WARNING: Do not click the [Reset to Default] button unless you intend to delete all users, accounts and usage data from your machine.

Print a Usage Report

At your Workstation

1. Open your web browser and enter the TCP/IP address of the machine in the Address or Location field. Press <Enter>.
2. Click the [Properties] tab.
3. Expand the [Accounting] folder, and then the [Xerox Standard Accounting] folder.
4. Click [Report and Reset].
5. Click the [Generate Report] button.
6. Click [Manage Accounting] and then click [Report and Reset] Workstation to refresh the page, then download the link from there.

Enable XSA in your Print Drivers

Refer to the driver Help for the steps to follow to enable XSA in your print drivers.

Backing Up XSA data and settings and Cloning to another device

The Cloning feature enables you to copy XSA account information to a file on your workstation. You can then use this file to restore the data on the same machine or to clone the data to other machines. You can only clone XSA accounts to another Xerox device that supports the XSA feature.

Check that the device you want to clone settings to supports XSA

1. At a networked workstation, open your web browser and enter the TCP/IP address of the machine that you want to clone to. Press <Enter>.
2. Click the [Properties] tab.
3. See if Xerox Standard Accounting is shown in the [General Setup] folder. If it is not, you cannot clone to this machine.
4. Click the [Xerox Standard Accounting] folder in the directory tree.
5. From the display of available hot links, verify that [Cloning] is among them.

To make a Back-up file

1. At your workstation, open your web browser and enter the TCP/IP address of the machine with the settings that you want to copy, in the Address bar. Press <Enter>.
2. Click the [Properties] tab.
3. Expand the [General Setup] folder, then select [Cloning].
To Clone all features simply select [Clone].
-or-
To customize individually, disable any of the features, then select [Clone].
4. Click [Save] on the dialog box that appears.
5. A dialog box will prompt you to specify the name and location for the cloned file. Verify that the extension reads .dat .
6. Click [Save]. The .dat file can now be used to restore the information to the same machine or to clone other machines.

To Restore Settings or Clone Settings to another Machine

NOTE: This procedure will cause the machine to reboot and be inaccessible over the network for several minutes.

1. Open your web browser and enter the TCP/IP address of the machine that you wish to restore or clone the settings to. Press <Enter>.
2. Click the [Properties] tab.
3. Expand the [Accounting] folder, and then the [Xerox Standard Accounting] folder.
4. Select [Cloning].
5. In the [Import Clone File] portion of the displayed dialog, click [Browse].

6. Locate the .dat clone file.

7. Click [Import Now].

NOTE: It may be necessary for you to use your web browser to view the Xerox Standard Accounting set up of Users and Groups on the new machine.

19 Glossary

This chapter contains a list of terms used in the System Administration Guide. Each term has a corresponding definition that reflects the meaning of the term as it is used in this Guide.

Terms Defined

Use the following definitions to learn more about the meanings of terms used in this Guide.

10Base-T	10-Mbps baseband Ethernet specification using two pairs of twisted-pair cabling: one pair for transmitting data and the other for receiving data. 10Base-T, which is part of the IEEE 802.3 specification, has a distance limit of approximately 100 meters per segment. See also Ethernet and IEEE.
100Base-TX	100-Mbps baseband Fast Ethernet specification using two pairs of either UTP or STP wiring. The first pair of wires is used to receive data; the second is used to transmit. To guarantee proper signal timing, a 100Base-TX segment cannot exceed 100 meters in length. Based on the IEEE 802.3 standard. See also Ethernet, and IEEE.
1000Base-TX	<p>1000Base-T uses all four cable pairs for simultaneous transmission in both directions through the use of echo cancellation and a 5-level pulse amplitude modulation (PAM-5) technique.</p> <p>In 1999, the 802.3ab standard (1000Base-T) allows Gigabit Ethernet to run over Category 5 copper cable, enabling GigE devices to be readily installed in 100BaseT networks without cable changes. The maximum distance between nodes is based on the type of transceiver and cable used.</p>
ASCII	An abbreviation of American Standard Code for Information Interchange. A coding scheme that assigns numeric values to letters, numbers, punctuation, and certain other characters.
Auditron	A tracking system, which is built into the machine. You can use Auditron to track overall machine usage, individual usage, and usage of each feature separately.
BOOTP	An abbreviation of Bootstrap Protocol. This is a protocol used by a network node to determine the IP address of its Ethernet interfaces, in order to boot a computer from a server via a network.

Client Server	A network environment in which the nodes communicate with a file server, and not directly with other nodes.
DHCP	An abbreviation of Dynamic Host Configuration Protocol. A protocol allowing the principal parameters of network devices (including IP Addresses) to be configured by central DHCP servers.
DNS	An abbreviation of Domain Name System. A system used in the Internet for translating names of network nodes into addresses.
Driver	Software that is loaded on the client workstation that prepares data to be sent to the machine.
Ethernet	Network transport technology commonly used to send data from one network node to another.
FTP	An abbreviation of File Transfer Protocol. An application protocol, part of the TCP/IP protocol stack, used for transferring files between network nodes.
Gateway Address	The Gateway Address is the IP Address of the gateway, or router, that the machine will use to access devices on other subnets.
HTTP	An abbreviation of Hyper Text Transfer Protocol. This is the Internet standard that supports the exchange of information on the World Wide Web (WWW). HTTP lays the foundation for transparent access to the Internet.
IEEE	An abbreviation of Institute of Electrical and Electronics Engineers. This is an organization of engineering and electronics professionals notable for developing the IEEE 802 standards for the physical and data-link layers of local area networks, following the ISO Open Systems Interconnection (OSI) model.
IP	See TCP/IP
IPv4/IPv6	Abbreviations for "Internet Protocol Version 4" and "Internet Protocol Version 6". IPv4 addresses are 32-bit identifiers used to address hosts on the Internet. They are expressed in dotted quad format, a series of decimal numbers separated by decimal points. IPv6 is the next generation protocol designed to replace IPv4. IPv6 addresses are 128-bit identifiers expressed in 16-bit hexadecimal numbers separated by colons. IPv6 corrects a number of problems in IPv4, such as the limited number of available addresses.
IPX	Internetwork Packet Exchange. IPX is part of NetWare. It routes packets to the correct node and to the correct process within the node.

LAN	An abbreviation of Local Area Network. This is a network that serves a relatively small area, such as one building, and does not require telecommunications services to reach all of the nodes.
LDAP	An abbreviation of Lightweight Directory Access Protocol. A protocol that allows sharing of corporate phone book information.
LPD	An abbreviation of Line Printer Daemon. This is a print management program that runs on a host.
NDS	An abbreviation of Novell Directory Services that was formerly known as NetWare Directory Services. This is a database used by Novell NetWare to organize resources for an entire network of NetWare servers. The database itself can be distributed across the network and accessed by all servers.
NetBEUI	An abbreviation of NetBIOS (Network Basic Input/Output System) Extended User Interface. It is an enhanced version of the NetBIOS protocol that is used by network operating systems, such as LAN Manager, LAN Server, Windows for Workgroups, and Windows NT. NetBEUI formalizes the transport frame and adds additional functions. NetBEUI is no longer supported by Xerox.
NetWare	A network operating system from Novell. Clients log onto one or more file servers, which provide services such as e-mail, printing, and filing.
Node	A device on a network that has an address and can send and/or receive data to and from other devices on the network.
PCL	An abbreviation of Printer Control Language, which is used by Hewlett-Packard. This is a set of commands that tells a printer how to print a document.
PCL5	A Hewlett-Packard Printer Control Language (PCL) that is the first version of PCL to support bi-directional communication between printer and computer.
PCL6	A Hewlett-Packard Printer Control Language (PCL). It is an interpreted language, similar to but more intelligent than PostScript. This version offers significant changes in the backward compatibility issue for Hewlett-Packard machines.
PCONSOLE	A NetWare utility that can be used to create, configure, monitor, and manage queues in a NetWare server, and to attach print servers to the queues.
PDF	An abbreviation of Portable Document Format. It is a file format developed by Adobe Systems. A PDF file can describe documents containing text and images, retaining all the formatting and fonts of the original copy. The document can then be displayed or printed, using application software, hardware, or operating system, which may differ from that used to create the original document.

PDL	An abbreviation of Page-Description Language. This refers to a programming language, such as PostScript, that is used to describe output to a printer or a display device, which then uses the instructions from the PDL to construct text and graphics and create the required page image.
Peer-to-Peer	A network environment in which the nodes communicate directly with other nodes. Windows for Workgroups, NetWare Lite, and Macintosh System 7 are examples of peer-to-peer networking products.
PostScript	PostScript is a page description language (PDL) developed by Adobe Systems. It is an object-oriented language, meaning that it treats images, including fonts, as collections of geometrical objects rather than as bitmaps. PostScript is the standard for desktop publishing because it is widely supported by both hardware and software vendors.
Print driver	See Driver.
Protocol	The rules that control the transmitting and receiving of data.
Queue	A place where jobs are stored temporarily, while they are waiting to be processed. A print queue will hold several print jobs.
RARP	An abbreviation of Reverse Address Resolution Protocol. This is a method for providing IP Addresses to nodes on a network. When a node powers up, it broadcasts a RARP packet containing its Ethernet Address. The RARP server receives the packet and sends the IP Address back to the node.
Router	A device that directs network packets to the segment of the network for which the packet is intended, and excludes packets that are not intended for a segment. Routers reduce unnecessary network traffic and control access to segments of the network.
SSDP	An abbreviation of Simple Service Discovery Protocol.
SMB	An abbreviation of Server Message Block. A protocol used to to share files or printers on Windows OS.
SNMP	An abbreviation of Simple Network Management Protocol. A protocol used to help manage complex networks.
SPX	An abbreviation of Sequenced Packet Exchange. SPX is part of NetWare. It makes sure that packets are received in the correct order and that there are no errors.
Subnet Mask	A mask used to identify which part of an IP Address is the Subnet Address and which part is the host (or device) address.
TBCP Filter	An abbreviation of Tagged Binary Control Protocol. This filter is only available when PostScript is enabled.

TCP/IP	An abbreviation of Transmission Control Protocol / Internet Protocol. TCP/IP is a set of communications protocols that is supported by a variety of computer platforms. TCP controls the data transfer and IP controls the routing of the data. The IP Address is a unique address that identifies a device in a network. The IP Address has to be set in the machine by the System Administrator.
TIFF	An abbreviation of Tagged Image File Format. A standard file format commonly used for scanning. Images scanned with the machine are captured in a TIFF 6.0 file format.
Twisted Pair	See 10Base-T.
XPS	An abbreviation for XML Paper Specification. It is a file format developed by Microsoft which is similar to Adobe PDF. XML is supported on Windows Vista.

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